

SUCCESSFUL PROFESSIONAL DEVELOPMENT MODEL COMPONENTS
IN TWO HIGH ACHIEVING MISSOURI SCHOOL DISTRICTS

A Dissertation by

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DEDICATION

This dissertation is dedicated to my wife Vickie and my son Chase.

Thank you for your love, encouragement, and never-ending support.

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ABSTRACT

A mixed-method research design was used to identify the components of professional development in two high achieving, high poverty K-12 Missouri public school districts, that most contributed to improved student achievement. A rigorous quantitative site selection process that incorporated five variables was developed and used. Seventy-eight percent of teachers at one district and 61% of teachers at the other district participated in an online survey that collected their perceptions on their district's professional development. Sixteen teachers at one district and 18 at the other district were purposively sampled and interviewed to develop a graphical model of their respective professional development process and to gain additional insight into their professional development processes that they perceived contributed to improved student achievement. Six conclusions were drawn from a combination of quantifiable data sources and the sum of teacher perceptions as systematically interpreted from all qualitative data sources. The study conclusions focused on (a) collaboration as a key professional development process, (b) leadership as an important element of effective professional development, (c) the relationship of professional development to student achievement, (d) the importance of technology and curriculum alignment, (e) evaluation as an essential element of improved teaching and learning, and (f) the continuous acquisition of new learning and skills development.

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Chapter 1

Introduction to the Study

Across the nation reform efforts persist to raise the bar of student achievement, most often vicariously through teacher learning. Educators are called to “master new skills and responsibilities and to change their practice” (Corcoran, 1995, p. 1) as a result of the many reform initiatives to improve student learning. Compounding the need to learn new skills is the quickened pace of change in the diversity of the student population educators serve (Haycock & Robinson, 2001). Given the multitude of methods whereby teachers can improve their craft, thereby positively impacting student achievement, what then were the most effective means to improve the teachers’ skills, responsibilities, and practice?

This research identified and described the components of professional development models that most contribute to the staff understanding of best instructional practices and the effectiveness of the implementation of best instructional practices in selected high achieving K-12 Missouri public school districts. The terms staff development, inservice education, human resource development, and professional development are used interchangeably in today’s educational literature to describe the activities teachers engage in to improve their skills, responsibilities, and practice (Sparks, 1994). For the purpose of this study, all activities associated with the means whereby a teacher endeavors to improve his/her skills, responsibilities, and practice shall fall under the general heading of professional development.

Background of Study

This study took place with a backdrop of ever increasing pressures on schools to improve student achievement, the most notable, the No Child Left Behind Act (NCLB) of 2001 (U.S. Department of Education, 2002), signed into law by President George W. Bush on January 8, 2002. This educational reform effort held districts and schools accountable for failing to make adequate yearly progress (AYP) toward educational standards (U.S. Department of Education, 2002). Faced with the possibility of state and federal sanctions for failing to meet AYP, the importance of effective professional development continued to be highlighted.

Along with the continued recognition of the importance of professional development was the continued concern over past failures and the lack of significant and sustained reform efforts to improve teaching and learning. The professional development literature was replete with the failings of past efforts as well as less than satisfactory results from many of the current efforts (Guskey, 2002; Haycock & Robinson, 2001). In spite of continued and past failures to reform teaching and learning, significant evidence existed that identified sustained improvement efforts driven by effective professional development practices.

Winners of the prestigious U.S. Department of Education's National Awards Program for Model Professional Development pointed to examples of schools and districts able to implement effective professional development practices as part of their improvement efforts (Hassel, 1999). In the context of these and similar efforts, improved student achievement, based upon sustained effective professional development models, was believed to be achievable.

Problem Statement

In spite of what we knew about teaching and learning, the core of how teachers teach and students learn did not change on any widespread scale in the last 40 years to significantly impact school improvement over an extended period of time (Darling-Hammond, 1997b; Elmore, 2000; Elmore, 2002; Guskey, 2002).

However, Guskey (Guskey, 2002) also pointed out that there existed exceptions to this pattern of inadequacy indicating that “at the core of each and every successful educational improvement effort is a thoughtfully conceived, well-designed, and well-supported professional development component” (p. 4).

Several factors contributed to our inability to break away from the more traditional models of professional development. Fullan and Stiegelbauer (1991) indicated the ineffectiveness of such things as one-shot workshops, the lack of follow-up and evaluation, failure to address individual needs, and topics selected by persons other than those that were trained as examples among the many reasons for less than effective professional development efforts. Others concurred that the complexities of the improvement process in varied settings demonstrated the impossibility of a one-size-fits-all model of professional development (Guskey, 2002; Pink & Hyde, 1992). Yet another issue had arisen in the very structure from which we operated in trying to transform professional development efforts.

The importance of an organizational structure in school districts that supported effective professional development practices was paramount. Anrig Professor of Educational Leadership at the Graduate School of Education, Harvard University, Richard Elmore (2002) expressed his idea of the “knowledge gap” in his

paper, written for the Albert Shanker Institute. He defined the knowledge gap as the difference between what we know to be effective professional development practices and our inability to pervade the existing organizational structures of education with them.

The problem is connecting the ideal prescriptions of the consensus model with the real problems of large-scale improvement and accountability.

Exhorting schools and school systems to engage in more enlightened professional development practices, even under the pressure of performance-based accountability, is unlikely to have much effect without more explicit guidance about how to bring these more enlightened practices into the mainstream of school life. This knowledge gap requires more explicit attention to the practice of improvement. (p. 11)

Policy makers also recognized the need for continuing focus on improvement efforts to strengthen teaching. Ingvarson, Meiers, and Beavis {Ingvarson, 2003 #134} noted the sizeable investments in professional development for teachers, fueling the increasing interest of policy makers in research that distinguished the key features of effective professional learning. Additionally, Ingvarson and associates. (2003) pointed out that policy makers seek research to inform the design of professional development that persisted to improved student learning.

Purpose of the Study

The purpose of this study was to describe what teachers identified as the critical components of their professional development model that positively impacted student achievement. This study was conducted in two high performing,

low SES K-12 Missouri public school districts, one large and one small. The following research questions guided the study:

1. What did teachers in a large high performing, low SES district identify as the critical components of their professional development model for student success?
2. What did teachers in a small high performing, low SES district identify as the critical components of their professional development model for student success?

Methodology

A mixed methods research design was employed to derive the greatest benefits of data collection strategies typical of the quantitative and qualitative research methods. Using more than one method to study the same phenomenon can strengthen the creditability and dependability of results. “This approach - called triangulation - was most often mentioned as the main advantage of the mixed method approach” (Frechtling & Sharp, 1997). An additional strength of this research design included a better understanding of the research problem (Creswell, 2003).

The data collection strategy of this study was sequential explanatory, in that the quantitative component was intended to explicate the context and provide stimulus and momentum for the subsequent qualitative phase of the study (Creswell, 2003). As the strategy name implied, the sequential explanatory strategy began with the collection and analysis of quantitative data followed by the collection and analysis of qualitative data (Creswell, 2003).

Quantitative district and student data sets were available from the Missouri Department of Elementary and Secondary Education (DESE). District and student

data sets were collected for years 2001 through 2005 for all K-12 Missouri public school districts. Potential K-12 school district sites were identified using descriptive statistics. Univariate analysis was used across all data sets. Univariate analysis described “each variable in a data set, separately” (Saint-Germain, 1997). Each data set was analyzed using the three major characteristics of distribution, central tendency, and dispersion (Calkins, 2005). The goal of these analyses was to identify two, one large and one small, K-12 school districts to study.

All certified teachers in the two selected K-12 school districts were invited to participate in an online professional development survey. The online survey enabled me to ascertain the thoughts and perceptions of respondents pertaining to the professional development model of each selected K-12 school district. Descriptive statistics were used to describe the online professional development survey respondents and provide analyses of the various components of their respective professional development model. The goal of these analyses was to assist in the identification any component(s) of the professional development model in the two selected school districts that most contributed to the implementation of effective instructional practice.

Methods utilized for qualitative data collection included a focus group activity which facilitated participant development of their district professional development model as a graphic representation followed by questions on same, personal interviews, and documents review. Data from each of the qualitative collection methods were unitized. I used electronic means to organize the data. Data collected from focus groups and personal interviews were analyzed using a constant

comparative process. Documents review data were analyzed using content analysis. Categories and themes emerged from the data. Chapter 3 details a complete account of the methodology utilized for this study.

Significance of Study

The intent of this study was not to evaluate the professional development model of the selected K-12 Missouri public school districts, rather it was to identify those components of the implemented professional development model at the district level that teachers perceived significantly impacted consistent use of effective instructional practice. Professional development literature on evaluation provided a starting point for this investigation. The framework that established this supposition was based upon Sparks' (2002) contention that more was contributed to identifying the value of professional development by the evaluation of local professional development efforts rather than large-scale examinations involving many school districts.

Further, the identification of selected K-12 school districts based upon significantly higher student achievement was rooted in the findings of researchers who concur on the importance of student outcomes as the basis for the evaluation of professional development (Elmore, 2002; Joyce & Showers, 2002). Given this foundation, this study was intended to expand upon the growing body of research that suggests improvements in student achievement will occur with investments in long term effective professional development (Darling-Hammond, 2001). More specifically, this study has attempted to delineate a professional development process model that when broken down to its smallest parts elucidates that

component of said model that most accounted for implementation of effective instructional practice that improved student achievement.

Definition of Terms

Application Service Provider (ASP) – Any company “that provide[s] services via the Internet. In most cases, the term ASP has come to denote companies that supply software applications and/or software-related services over the Internet” (HowStuffWorks Inc, 2006).

Missouri Assessment Plan (MAP) – Achievement tests in the subject areas of communication arts and math administered annually to Missouri public school students in designated grades as required by the guidelines of the No Child Left Behind Act (NCLB) of 2001.

Missouri Department of Elementary and Secondary Education (DESE, pronounced Dĕs- ĕ) – headed by a state Board of Education as provided in article IX, Constitution of Missouri, and the Missouri Revised Statutes chapter 161 and others and charged with the supervision of instruction in the public schools.

Missouri School Improvement Program (MSIP) – mandated by state law, this process and program has the responsibility of reviewing and accrediting districts in Missouri within a five-year review cycle. Primary responsibilities include conducting training sessions, mailing and processing materials used in the review process such as advance questionnaires, often referred to as the MSIP survey. (Missouri Department of Elementary and Secondary Education, 2005a)

Model – “a representation of a set of components of a process, system, or subject area, generally developed for understanding, analysis, improvement, and/or

replacement of the process” (Interoperability Clearinghouse, 2003, section ICH Glossary).

Pedagogy – “a combination of knowledge and skills required for effective teaching” (Chapuis, 2003).

Process Modeling – Breaking down a process into its smallest units of activities.

Professional Development – All activities associated with the means whereby a public school teacher endeavors to improve his/her teaching skills, responsibilities, and practice.

[Student] Social Economic Status (SES) – The total population of students considered to be living in poverty or economically disadvantaged homes based upon state and federal guidelines for receiving a free or reduced lunch.

Univariate Analysis – “Each variable in a data set, [analyzed] separately” (Saint-Germain, 1997).

Delimitations and Limitations of Study

The focus group protocol included the development, by participants, of a graphical representation of their perceived professional development model. In this mixed-method study, some may argue that the descriptions and/or graphic representations of professional development models of selected K-12 Missouri public school districts were oversimplified and inadequate as the bases of my findings and recommendations. In his analysis of a web-based learning environment model, Reeves (1999) suggested, “No model is a perfect reflection of reality, and some might argue that models...are oversimplified and inadequate to capture the complexities

involved in teaching and learning” (p. 3). Through the triangulation of multiple data sources, including between method triangulation, the researcher provided “greater confidence in the observed findings” (Erlandson *et al.*, 1993). Additionally, the models described and/or graphically represented were developed from the purposive sample of subjects at the two sites.

The selection of only two districts was intended to provide deeper insight into the extent of selected K-12 school district professional development models. However, Schram (2003) indicated, “Site-specific research represents a fairly constrained choice in that the study is defined by and closely linked to a particular place” (p. 163). While the proposed study was not site-specific, the selection of only two districts may have constrained the study more so than the selection of additional districts for study.

Survey data for this study was electronically self-reported from all participating certified staff in the selected K-12 school districts. It is possible that individuals may have responded multiple times. This would have led to falsely elevated numbers representing single individuals or groups of persons. The triangulation of data gathered from focus groups and interviews compared to the survey data was intended to mitigate this potential problem.

Finally, site selection based in part upon student achievement in communication arts and mathematics as measured by the Missouri Assessment Plan (MAP) achievement tests may not accurately represent high or improved student achievement in selected K-12 school districts. Shepard (1997) pointed to “evidence that levels of achievement reported on high-stakes accountability test

were not real” (p. 10) in her review of “teach-the-test” literature. Nichols, Glass, and Berliner (2005) concurred in their study of the affects of high-stakes testing on student achievement indicating “that there is no convincing evidence that the pressure associated with high-stakes testing leads to any important benefits for students’ achievement...call[ing] for a moratorium on policies that force the public education system to rely on high-stakes testing” (p. iii). Achievement data for all Missouri students reported test scores for the years 2001 through 2005 indicated improved student achievement at grades 3 and 11 in communication arts and grades 4 and 10 in mathematics (Missouri Department of Elementary and Secondary Education, 2005b). K-12 school districts selected to participate in this study were from among those districts with demonstrated student improvement over time and across all grades tested in both subject areas.

Outline of Study

I have organized the study into 6 chapters. This chapter has served as the introduction to the study including the statement of the problem, purpose of the study, a summary of the methodology, significance of the study, delimitations and limitations, and definition of terms.

Chapter 2 represents the literature review that establishes a theoretical foundation upon which a professional development model affects implementation and understanding of best instructional practices in schools. In addition, the review provides information that supports the need for the study and serves as a conceptual base for the analysis of the data collected during the study.

The literature review is divided into eight areas around the concept of professional development: (a) defining professional development, (b) defining professional development model, (c) characteristics of effective professional development models, (d) implementation strategies of professional development models, (e) effective evaluation of professional development models, (f) difficulties implementing effective professional development models, (g) effective instructional practice, and (h) other relevant topics that may inform the investigation. A summary of the literature review concludes Chapter 2.

Chapter 3 begins with a rationale for the selected research design along side supporting theory. This is followed by a comprehensive description of the mixed methods research design that details the sequential explanatory, quantitative followed by qualitative data collection techniques. Each of the data collection process used is detailed in this section. The chapter concludes with an explanation of triangulation and data analysis used to assure the credibility upon which the findings, conclusions and recommendations are based.

Chapter 4 is broken into three sections each detailing the selected small K-12 Missouri public school district. For the purpose of this study the selected small K-12 school district will be referenced by the pseudonym Lakeside R-I. The first section of the chapter contains a thick description of the selected small K-12 school district Lakeside R-I. Lakeside R-I is described in terms of its relative school and community size, including but not limited to community, staff and student demographics. The second section of the chapter details the selected small K-12 school district Lakeside R-I in terms of data collected in the quantitative phase of

sequential explanatory methodology. The second section of the chapter contains two subsections, (a) the analysis and findings of the student achievement data and (b) the analysis and findings of the online professional development survey data. The third section of the chapter presents the data analysis and findings gleaned from the final and qualitative data collection phase in the sequential explanatory design. Three methods of data collection were used to obtain information about teachers' perceptions of Lakeside R-I professional development during this phase of data collection. The three methods used included focus group interviews, personal interviews, and documents review.

Chapter 5, like Chapter 4, is broken into three sections. For the purpose of this study the selected large K-12 school district will be referenced by the pseudonym Plainview R-II. The first section of the chapter contains a thick description the selected large K-12 school district Plainview R-II. Plainview R-II is described in terms of its relative school and community size, including but not limited to community, staff, and student demographics. The second section of the chapter details the selected large K-12 school district Plainview R-II in terms of data collected in the quantitative phase of sequential explanatory methodology. The second section of the chapter contains two subsections, (a) the analysis and findings of the student achievement data and (b) the analysis and findings of the online professional development survey data. The chapter concludes with the third section that presents the data analysis and findings gleaned from the final and qualitative data collection phase in the sequential explanatory design. I utilized three methods of data collection to obtain information about teachers' perceptions of Lakeside R-I

professional development during this phase of data collection. The three methods used included focus group interviews, personal interviews, and documents review.

Chapter 6 presents a synopsis of the study. It includes conclusions and implications predicated upon the findings in the three previous chapters and the literature review. The study concludes with implications for future research.

Chapter 2

Review of Literature

This literature review established a theoretical foundation upon which the concept of the affect of a professional development model on the implementation and understanding of best instructional practices in schools may be developed. In addition, the review provided information that supported the need for the study and served as a conceptual base for the analysis of the data collected during the study.

The literature on professional development was vast. The literature in this review will address the many facets of professional development and is divided into eight areas. For the purpose of this study, the literature review will be limited to the topics (a) defining professional development, (b) defining professional development model, (c) characteristics of effective professional development models, (d) implementation strategies of professional development models, (e) effective evaluation of professional development models, (f) difficulties implementing effective professional development models, (g) effective instructional practice, and (h) other relevant topics that may inform the investigation.

Defining Professional Development

A plethora of study areas and discussions around the topic professional development filled the annals of literature. A keyword search of the ERIC database (<http://www.eric.ed.gov/>) using the search phrase “professional development” yielded 20,491 hits on January 28, 2007. While similar terms such as inservice education, teacher training, staff development, and human resource development further expanded the breadth of the topic, these terms also implied something different for

particular groups or individuals (National Staff Development Council, 2006). However, several similarities existed across a broad spectrum of researchers, organizations, and reference works in defining professional development.

Corcoran (1995) noted examples of professional development activities which included deepening of content knowledge, learning new methods of teaching, working with colleagues, critically examining teaching and learning standards, as well as the development, mastery, and reflection on new approaches to working with children. In addition to these professional development activities, the National Staff Development Council (2006) also listed a variety of teacher activities including visiting model schools, participating in a school improvement committee, writing curriculum, and keeping a journal about teaching practices. Fullan and Steigelbauer (1991) expanded upon these definitions stating professional development was the "sum of formal and informal learning experiences throughout one's career from preservice teacher education to retirement" (p. 326). Furthermore, defining professional development need not be limited to educational researchers and their organizations.

The National Conference of State Legislatures (NCSL) advised member states that the primary role of professional development was improving student learning (Hirsch, E. & Hirsh, S., 2002). Additionally, the NCSL definition exemplified the connection between improved teaching and higher levels of student learning. NCSL also indicated that in spite of these recognitions, instead, often times policy makers focus on issues of relicensure or recertification.

Organizations such as the Canadian Council for the Arts (n.d.), The Commission on Applied and Clinical Sociology (n.d.), and the Queensland Government Information Industries Bureau (n.d.) specifically delineated professional development for their membership. Common themes among each operational definition included continual learning, and improved skill through such vehicles as study, research, and training. These types of activities were also highlighted in reference books defining professional development.

The phrase, *professional development*, broken down to its root words, *profession* and *develop*, culminated in a definition from Merriam-Webster Online Dictionary (n.d.), “the act, process, or result of developing one for the vocation or profession, characterized by or conforming to the technical or ethical standards of a profession, in which one customarily engages, requiring specialized knowledge and often long and intensive academic preparation.” Additionally, the thesaurus of the Educational Resources Information Center (1979) database, referred to professional development as "activities to enhance professional career growth."

Conversely, others argued that the study of professional development was hindered by the lack of a consensus definition. Researchers Maxwell, Feild, and Clifford, based upon their meta-analysis of professional development in the area of early childhood education concluded “...no common definition of professional development exists” (McCormick Tribune Center for Early Childhood Leadership, 2005). The result of these findings lead the researchers to develop their own definition based upon what they identified as the three key components of professional development: education, training, and credential.

Based upon this summation of professional development in literature, organizations, and reference work, the operational definition of professional development for this work included all activities associated with the means whereby a public school teacher endeavors to improve his/her teaching skills, responsibilities, and practice. This definition oriented the study of professional development models. The next section of the literature review is intended to further develop the framework of the study drawing attention to the need to clearly define a model and its use in analyzing professional development.

Defining Professional Development Model

This section is not intended to delineate the various names and types of professional development models which are dealt with in the next section of the literature review. Rather, in order to answer the research questions and clarify the framework of the study, the reader is oriented to a “model” in the context of and for the purpose of analyzing professional development. A professional development model, for the purpose of this study, is first and foremost just that, a model.

For the purpose of this study, the Interoperability Clearinghouse (2003) model definition was used, “a representation of a set of components of a process, system, or subject area, generally developed for understanding, analysis, improvement, and/or replacement of the process” (ICH Glossary section). In this case the process that was studied for understanding was professional development. The choice of this definition was strengthened by a similar definition used by the renowned International Organization of Standardization (ISO), a network of the national standards institutes of 156 countries. ISO (1996) defined “a model [as] an

explicit expression of one's understanding of a system or situation and of the relevant elements and relationships; it represents the system elements and the connectivity between the elements” (2.2 Definitions of Model Concepts section).

In the context of a professional development model, these definitions denoted the importance of process, more specifically, process modeling. Business and industry used process modeling to communicate complex business functions in a form more easily understandable by people (Giaglis, n.d.); Ministry of Forests and Range, 1996; Sparx Systems, 2004). One of the more common types of process modeling in business was flowcharting (Cordes, 1998). Flowcharting allowed one to break down a process into its smallest units of activities through process modeling, which facilitated standardization of the process. “From a design perspective, modeling provides explicit guidelines for modularity, re-usability, flexibility and integrity” (Ministry of Forests and Range, 1996).

The strength of a clearly defined process was further highlighted by Koch (2006) in his summary of the key components of a high-quality process: goal, consistency, predictability, quality, timeliness, efficiency, and effectiveness. Most importantly, Koch (2006) indicated “the process must actually be effective in achieving its goals. All of the efficiency, timeliness and predictability in the world are wasted if the process is not doing what the stakeholders need of it” (Effectiveness section).

Having defined a model more explicitly for use in this study, the examination of professional development as a process, and breaking the professional development process down into relevant components and relationships, was

intended to provide and more clearly define the framework for studying professional development models. The next section of the literature review will examine the specifics of effective professional development models as further clarification of the framework for analyzing professional development models in selected high achieving K-12 Missouri public school districts.

Effective Professional Development Models

Research of the 1990s clearly indicated a shift in what was once thought to be effective professional development. Common themes related to effective professional development were the issues of teacher learning and time to provide teachers with continuing opportunities to study, reflect upon, and apply the research on teaching and learning (Cook & Fine, 1997). Additionally, effective professional development was no longer considered a learning experience delivered on a particular day, rather continued teacher learning through such models as action research, study groups, reflection and teaming were to be intertwined with the educators' school day (Cook & Fine, 1997; Fine & Raack, 1994).

Researchers clearly outlined and shared similar characteristics of effective professional development. Peixotto and Fager (1998) concluded that the similarities in effective professional development included: activities which were intensive and sustained; occurred through collaborative planning and implementation; and engaged teachers in continuous inquiry and improvement. Similarly, in a survey of 1,000 teachers, Garet, Porter, Desimone, Birman, and Yoon (2001) indicated the strongest relationship between staff development and change in teacher behavior occurred when the feature of staff development included focus on content

knowledge, opportunities for active learning, and coherence of the staff development activities.

A clarification of each of these features was offered by Marzano (2003). He indicated that staff development activities were focused on content when the activities linked specific strategies with specific subject areas. An opportunity for active learning was evident in staff development when teachers were given the opportunity to apply learned pedagogical knowledge. Marzano (2003) pointed out that staff development programs evidenced coherence when activities built upon one another result in a change in teacher behavior.

Guskey (2003b) noted similar characteristics in his analysis of 13 different lists of characteristics of effective professional development, all published in the last ten years from a variety of organizations and associations. Of the 21 characteristics cited in the lists, the most frequently cited was enhancement of teachers' content and pedagogical knowledge. Other frequently mentioned characteristics included the provision of sufficient time and other resources as well as the promotion of collegiality and collaborative exchange.

In spite of this extensive literature base describing best practices in professional development, Garet and associates (1999) pointed out that "relatively little systematic research has been conducted on the effects of professional development on improvements in teaching or on student outcomes" (§ 18). Kelleher (2003) concurred that often times no measures existed to determine the results of professional development and more pointedly, results in terms of student learning.

In his six stage professional development model, Kelleher's (2003) first stage began with setting measurable student targets for learning.

This emphasis on student learning as a quantifiable measure of teacher professional development altered what was considered effective professional development. Garet and associates (1999) indicated that this positive change has been evidenced with the goal of professional development more explicitly addressing enhanced learning of challenging content for all students. Likewise, Sparks (2002) indicated that effective professional development must focus on improving student outcomes rather than simply meeting administrative mandates.

In spite of what we knew about the practice and measures of effective professional development, Peixotto and Fager (1998) pointed out the difficulty of implementing what was known to be effective professional development models. The next section of the literature review is intended to suggest successful methods of implementing effective professional development models.

Implementation Strategies of Professional Development Models

Numerous examples of implementation strategies for professional development based upon a review of current research and award-winning schools' models were available to guide educational leaders. Common themes among those listed included the use of best practices, appropriate policy development, understanding of the change process, and resource availability (Hassel, 1999). In an analysis of recipients' applications for the U.S. Department of Education's National Award for Model Professional Development, Hassel (1999) concluded that recipients shared four common steps in the implementation of successful professional

development: (a) incorporate best practices, (b) policies and practices that support professional development, (c) appropriate resources, and (d) make professional development part of everyday life at school.

Likewise, a study of the 1996 and 1998 school recipients of the U.S. Department of Education's National Award for Model Professional Development revealed the importance of such resources as "time, supportive contexts, strong leadership, and follow-up" used in the professional development activities for impacting student achievement through the implementation of proven educational programs (Killion *et al.*, 1999). Teacher and principal advice from the eight award-winning schools focused almost exclusively on the importance of the change process in the implementation of effective professional development.

Killion and associates (1999) outlined three categories of advice offered by the teachers and principals: "1) understanding how people respond to change and suggestions for handling various responses, 2) creating commitment and motivation for change, and 3) resources necessary for change" (Process of Change section).

Additionally, in her study of four inner-city elementary schools having implemented a professional development model focused upon student improvement, MacGilchrist (1996) reflected on the lessons learned. Once again, common themes included teacher collaboration, student learning outcomes, and policy supportive of effective professional development.

Similarly, in their study of Eisenhower-funded professional development programs, Desimone and associates (2002) surmised implementation strategies to be strongly associated with effective professional development. Desimone and

associates (2002) cited the importance of an established cycle of (a) planning, studying and implementing; (b) adequate resources; and (c) teacher involvement in planning activities, as keys to the implementation of effective professional development.

Given the many aspects of effective professional development models and implementation of same, it was important to understand “not all forms of professional development are equally effective” (2000). Guskey (2000) noted that an understanding of professional development effectiveness was related to evaluation. The next section of the literature review will orient the reader to the role of evaluation in determining the effectiveness of professional development models.

Effective Evaluation of Professional Development Models

Guskey (2000) was the author of one of the more comprehensive works dedicated solely to evaluating professional development. In his book he outlined a number of items including several models of professional evaluation, types of evaluation, and his definition of evaluation which stated, “Evaluation is the systematic investigation of merit or worth” (pg 41). He also explained the importance of distinguishing merit and worth, noting that merit spoke of comparison to a standard, while worth identified whether or not the program under evaluation was aligned with the organization’s mission. While not as comprehensive in their development of professional development evaluation, other authors and researchers addressed the topic as part of a professional development in general.

The evaluation of professional development was described in many forms, both formal and informal. Sparks (2002) contended, “Local evaluation studies of

staff development are more important than large-scale ‘definitive’ research to demonstrate the value of staff development” (pg 11-16). Killion and associates (1999) concurred in their study of eight schools that received the National Award for Model Professional Development. The schools studied used many different forms of evaluation including (a) gathering teacher reactions to professional development activities through surveys and checklists, and attendance records; (b) evaluating teacher portfolios, action plans, and evidence of goal attainment; and (c) the use of principal evaluations, examinations of student work and state test results. In spite of the different methods of evaluation and the multiple sources of documentation, researchers shared many common characteristics of effective evaluation.

Peixotto and Fager (1998) indicated that educators are increasingly measuring the effectiveness of professional development based upon a clear relationship with improved student performance. Likewise, Hassel (1999) found that award winning professional development models of evaluation criteria include improvement in student learning in addition to narrowing of student achievement gaps and improvement in teaching. Guskey (2002) asserted that the evaluation of professional development required the collection of information on five different levels: (a) participant reactions, (b) knowledge and skills gained by participants, (c) organizational characteristics and attributes that support professional development and change, (d) change in participant professional practice, and (e) affect on students (Critical Levels of Professional Development Evaluation section). Common among each of these findings was the measure or affect on student achievement.

Elmore (2002) contended that given the imperative to positively impact student achievement, effective professional development “should be evaluated continuously and primarily on the basis of the effect it has on student achievement” (p. 8). Joyce and Showers (2002) agreed and indicated evaluation began with focus on the desired student outcomes that predicated the need for staff development. Loucks-Horsley (2003), however, cautioned educators not evaluate student outcomes prematurely.

Loucks-Horsley (2003) indicated that changes in student outcomes tied to professional development programs cannot be expected until the professional development program has been fully implemented over time. Other difficulties associated with evaluation included those associated with measures of what was easiest: satisfaction of participants (Guskey, 2000). These areas of concern related to the evaluation of professional development pointed to the difficulties often associated with implementation of the professional development models. The next section of the literature review outlines some of the difficulties of implementation.

Difficulties Implementing Effective Professional Development Models

A survey of current literature was replete with examples of the difficulties related to reform efforts to improve student learning through effective use of professional development. Peixotto and Fager (1998) described the difficulties related to “implementing a variety of curriculum, instruction, and assessment strategies intended to support” high academic standards. They noted, “To make such reform a reality, there is a growing realization that effective and meaningful professional development opportunities are critical to the successful implementation

of any change agenda” (p. 3). Darling-Hammond and McLaughlin (1995) concurred, “the situation-specific nature of the kind of teaching and learning envisioned by school reformers is the key challenge for teachers' professional development” (¶ 1).

Research also suggested there were multiple movements in school reform, thereby complicating the issue of effective professional development. Little (1994) proposed that a problem existed between what she termed the “five streams of reform” and the most common forms of teachers' professional development. She stated, “The dominant ‘training’ model of teachers' professional development--a model focused primarily on expanding an individual repertoire of well-defined and skillful classroom practice--is not adequate to the ambitious visions of teaching and schooling embedded in present reform initiatives” (¶ 1).

Researchers indicated that many local professional development programs typically had weak effects on practice because they lacked focus, intensity, follow-up, and continuity (Corcoran, 1995). Again, however, Loucks-Horsley and associates (2003) cautioned policy makers and professional development designers that the implementation of professional development occurs over time. While implementation occurs over time, Reeves (2006), in his reference to collaboration and related professional development training on same, pointed out the problem with a failure to provide time for staff to implement.

Pfeiffer and Sutton (1999) spoke to many of the implementation problems in their study of organizations to determine why so little change occurred in organizations despite the significant investments in time and resources to acquire new knowledge and skills. They defined the knowing-doing problem as “the

challenge of turning knowledge about how to enhance organizational performance into actions consistent with that knowledge” (p. 4). While they acknowledged that no simple answer to the knowing-doing problem existed, Pfeiffer and Sutton (1999) indicated the imperative of learning by doing often referred to in the professional development literature as job embedded professional development (Sparks, 2002; Hassel, 1999; Ganser, 2000; Galloway, n.d.; Miller, 1999). The focus of the literature review to this point has been aspects of the study related to professional development. The review now turns to look at effective instructional practice.

Effective Instructional Practice

For the purpose of this study, effective instructional practice will be defined based upon the well-known and often quoted work of researchers at Mid-continent Research for Education and Learning (McREL). In their meta-analysis of selected research studies on instructional strategies that could be used by teachers in K-12 classrooms, McREL researchers determined those instructional practices that had the highest effect size in terms of increasing or decreasing student achievement (Marzano *et al.*, 2001). The McREL study was the basis of the book *Classroom Instruction that Works* by Marzano, Pickering, and Pollock (2001). The authors stated “one of the primary goals of the McREL study was to identify those instructional strategies that have a high probability of enhancing student achievement for all students in all subject areas at all grade levels” (p. 6-7).

In their book, the authors described the nine instructional strategies identified in the McREL study that were most likely to improve student achievement across all content areas and across all grade levels:

(a) Identifying similarities and differences; (b) Summarizing and note taking; (c) Reinforcing effort and providing recognition; (d) Homework and practice; (e) Nonlinguistic representations; (f) Cooperative learning; (g) Setting objectives and providing feedback; (h) Generating and testing hypotheses; and (i) Cues, questions, and advance organizers. The McREL study team concluded none of the identified instructional strategies worked in all circumstances, no matter the teacher's ability or the students' achievement level. Further, teachers were informed to consider the situation when applying any one of the instructional strategies identified by the McREL study team.

Research in the area of effective instructional practice often times broached the topic of effective teaching, herein referred to as pedagogy. Recent research on educational pedagogy led to a more comprehensive definition of what was most simply described as “a combination of knowledge and skills required for effective teaching” (Chapuis, 2003). Specifically, Lovat (2003) described new research that defined pedagogy as “a highly complex blend of theoretical understanding and practical skill” (p. 11).

In her work for the Center for Research on Education, Diversity & Excellence, University of California, Santa Cruz, CA, researcher Dalton (1998) pointed out the critical nature of effective teaching in her explanation of five standards for pedagogy. Dalton (1998) pointed out effective teaching of all students, in particular students at-risk, was marked by the imperative of “teachers assist[ing] students continuously through interaction and activity in the ongoing social events of the classroom” (p. 7). However, Darling-Hammond (1997a) pointed out that

effective teaching that generated academic attainment for all students necessitated more than content, child development, and motivational skill. Equally important for effective teaching was pedagogy (Dalton, 1998).

Marzano (2003) bolstered the importance of pedagogy in his review of 35 years of research. In his analysis of factors that influenced student academic achievement, he examined three areas: (a) school-level factors, (b) teacher-level factors, and (c) student-level factors. Professionalism and pedagogical knowledge were two aspects of school-level factors Marzano (2003) described. He concluded that knowledge of one's subject matter was part of professionalism; however, more importantly professionalism involved pedagogy or how to teach subject-matter content.

A final point on effective instructional practice highlighted the comprehensive nature of teaching. Darling-Hammond (1997a) indicated the lessons learned with any effort to improve teaching and learning were decidedly "effective or ineffective by the knowledge, skills, and commitments of those in schools" (p. 7). That having been said, the literature review concludes with a summary of additional topics that may emerge as relevant areas to guide this study and/or elaborate on the findings.

Additional Topics for Consideration

The often cited work of Sparks and Hirsh, *A New Vision for Staff Development* (Sparks & Hirsh, 1997), indicated three prevailing notions in the United States changing schools and their respective professional development initiatives: (a) results-driven education, (b) systems thinking, and (c)

constructivism. The authors' reference to results-driven education and corresponding explanation referred to professional development planning, implementation and measurement connected to desired outcomes for student achievement, and has been outlined in this literature review. It is systems thinking that will be briefly explored and may inform the proposed study.

Systems Thinking

Systems thinking originated in the field of system dynamics by founder Professor Jay W. Forrester during the mid-1950s at the Massachusetts Institute of Technology (MIT) (Aronson, 1996; Forrester, 1989; U.S. Department of Energy, 1997). Over the last 20 years, Professor Forrester extended the field of system dynamics to K-12 education through his continued work at MIT. Systems thinking and system dynamics were identical in many ways; however, system dynamics included “constructing and testing a computer simulation model” (Relationship of Systems Thinking to System Dynamics section), not often done in systems thinking (U.S. Department of Energy, 1997).

The focus of systems thinking was to study how other elements of a system acted upon the part of the system under study. Rather than focus on a single element of the system to analyze, systems thinking expanded the view of the study to look at the interactions among other elements of the system upon the part of the system under study. Aronson (1996) stated “this results in sometimes strikingly different conclusions than those generated by traditional forms of analysis, especially when what is being studied is dynamically complex or has a great deal of

feedback from other sources, internal or external” (systems thinking approach section, ¶ 1).

Senge and associate’s (2000) classic work for educators, *Schools that Learn: A Fifth Discipline Fieldbook for Educators, Parents, and Everyone Who Cares About Education*, delineated a continuum of systems thinking practices: system-wide thinking, open systems thinking, human systems thinking, process systems thinking, living systems thinking, feedback-related systems thinking, and system dynamics simulation. Relative to K-12 education Senge and associates (2000) pointed out “every educational practice is a system” and “systems thinking is the study of system structure and behavior” (p. 78). Thus the value of systems thinking was realized in the study of the most difficult problems “...involving complex issues, those that depend a great deal on the past, or on the actions of others, and those stemming from ineffective coordination among those involved” (Aronson, 1996).

Quality Movements

Another example of systems thinking often referenced was Total Quality Management (TQM). TQM emphasized process measurement and controls as a means of continuous improvement, which was at the heart of TQM. Dr. W. Edwards Deming, a statistician and management expert, was often times cited for creating the foundation for TQM in his work with the Japanese in the early 1950s following World War II. TQM has increasingly become more popular since the early 1980s (Clark, 2004; Hashmi, n.d.).

TQM was cited as a model for school and classroom reform at both the K-12 level and for higher education (Leonard, 1996; Jenkins, 2003). In their review of the

TQM model, Brinson and Miller (1995) were particularly interested in the systems perspective of the TQM model and its application for school reform in an era of decentralization brought on by increasing accountability on schools to improve student achievement. While TQM like many other reform models was not the panacea, Terry (1996) also acknowledged the possibilities for improvement, citing successful implementations along with the benefits derived from implementing the TQM philosophy. Continuous Quality Improvement (CQI), similar and often times used interchangeably with TQM, was another example of a systems approach to improvement.

Wright, Brody-Saks, Thomas, Harrington-Lueker (2000) pointed out the differences between CQI and TQM, noting that TQM referred primarily to “techniques and tools” (p. 79). CQI on the other hand provided a framework for the use of these techniques and tools based upon what the authors termed a “habit of mind” (p. 79). In their explanation of this phrase they outlined seven principles of CQI for education: (a) model continuous improvement, (b) adopt a customer focus, (c) data-based decision making, (d) establish measures, (d) open communications and feedback, (e) celebrate improvement, and (f) promote continuous improvement through policy and discussion. Whether the same or different, CQI/TQM principles, having been implemented in K-12 schools, have positively correlated with increased student achievement.

In their study of 18 school districts across three regions of the United States, Marshall, Pritchard, and Gunderson (2004) found a high correlation between the number of Deming’s 14 principles of quality implemented and the overall health of

the school district. Additionally, Marshall and associates (2004) “found a significant relation between organizational health and student achievement” (p. 175). As previously noted in this section of the literature review, Dr. Deming was considered to be a founder of the principles of TQM. Nonetheless, this study indicated the potential for school reform resulting in improved student achievement when the principles of systems thinking were applied.

Summary of Literature Review

Rising standards for student achievement coupled with increasing emphasis on closing the achievement gap between the highest and lowest performing students continue to strengthen the importance of a well designed and effective professional development model (Loucks-Horsley, 2003; Sparks & Hirsh, 1997). In particular, efforts to improve teaching and learning are merely good ideas without effective professional development (Sparks & Hirsh, 1997). Given the imperative for the continued improvement of the teaching and learning process to address the needs of all students, what then is an effective professional development model, insuring to the greatest extent possible, the consistent use of the most effective instructional practices in all classrooms?

Defining Professional Development

The study of an effective professional development model begs the need to define three aspects of the phrase “effective professional development model.” The first definition ventures to explicate professional development. The basis of defining professional development was derived from a broad spectrum of researchers, organizations, and reference works. Definitions for professional development

included the work of Corcoran (1995), Education Resource Information Center (1979), Fullan and Stiegelbauer (1991), McCormick Tribune Center for Early Childhood Leadership (2005), and the National Staff Development Council (2006). Based upon this summation of professional development in literature, organizations, and reference work, the operational definition of professional development for this work included all activities associated with the means whereby a public school teacher endeavors to improve his/her teaching skills, responsibilities, and practice.

Defining Professional Development Model

The next definition from the phrase effective professional development model was that of a professional development model or more explicitly, a model. For the purpose of this study, the Interoperability Clearinghouse (2003) model definition was used, “a representation of a set of components of a process, system, or subject area, generally developed for understanding, analysis, improvement, and/or replacement of the process” (ICH Glossary section). This definition also highlighted the importance of process. Breaking down the process of professional development into its smallest units of activity through process modeling was intended to facilitate the identification of those components of an effective professional development model that may increase the probability of effective instructional practice (Koch, 2006).

Characteristics of Effective Professional Development Models

The final definition of the phrase effective professional development model offers several examples of effective professional development models, emphasis

effective. A review of research indicated a shift from the additive model of professional development to more effective models such as action research, study groups, reflection and teaming (Cook & Fine, 1997; Fine & Raack, 1994; Loucks-Horsley, 2003). Additionally, effective professional development included such activities as those which were intensive and sustained, occurred through collaborative planning and implementation, and engaged teachers in continuous inquiry and improvement (Peixotto & Fager, 1998). Finally, Fullan and Stiegelbauer (1991) and Marzano (2003) pointed out the importance of connecting pedagogy and content as an effective professional development model intended to affect change in teacher practice.

Conversely, Garet and associates. (1999) pointed out the limited body of systematic research that elucidates the relationship between effective professional development and improved teaching and learning. However, Garet and associates. (1999) and Sparks (2002) concurred that the emphasis on student achievement as a measure of effective professional development has brought about a focus on enhanced student learning and what was considered effective professional development. In spite of this understanding about the practice and measures of effective professional development, Peixotto and Fager (1998) pointed out the difficulties of implementing effective professional development models.

Implementation Strategies of Professional Development Models

Several researchers pointed out effective strategies districts use to implement professional develop models. Common themes among their studies included a focus on the change process, appropriate resources, student outcomes and policies that

support effective professional development (Desimone et al., 2002; Hassel, 1999; MacGilchrist, 1996). Although the identification of effective professional development models and the implementation of same postulates improved teaching and learning, effectiveness was related to evaluation (Guskey, 2000).

Highlighting the importance of evaluation, Sparks (2002) pointed out the value of professional development was best established at the local level as opposed to large-scale examinations of professional development across multiple sites. Moreover, researchers indicated the importance of student outcomes as the basis for the evaluation of professional development (Elmore, 2002; Joyce & Showers, 2002). Likewise, during the evaluation of professional development, particular caution should be used so as not to expect immediate improvement in student outcomes until time was allowed for full implementation (Loucks-Horsley, 2003). This caution related to the evaluation of professional development also pointed to the difficulties often associated with the implementation of professional development models.

Difficulties Implementing Effective Professional Development Models

A number of difficulties associated with the implementation of effective professional development were outlined by researchers. The difficulties related to various implementation strategies included a lack of focus and implementing multiple instructional strategies at the same time (Corcoran, 1995; Peixotto & Fager, 1998). In addition to these difficulties with implementation efforts, Pfeiffer and Sutton (1999) spoke to the knowing-doing problem. Put in plain words, the problem was a failure to do what we know to be effective. One such effective professional development model Pfeiffer & Sutton (1999) recognized was job

embedded professional development. Others concurred that this was a highly effective means of improving the teaching and learning process (Galloway, n.d.; Ganser, 2000; Hassel, 1999; Miller, 1999; Sparks, 2002).

Effective Instructional Practice

Like other professional development models, the intent of job embedded professional development was to improve teaching and learning. Moving closer to the classroom, it was important to address teaching and learning in terms of how effective instructional practice was defined. For the purpose of this study, effective instructional practice was based upon the work of McREL researchers as outlined in the book *Classroom Instruction that Works* (2001). Researchers indicated effective instructional practices were those that “have a high probability of enhancing student achievement for all students in all subject areas at all grade levels” (p. 6-7). Marzano and associates. (2001) also outlined nine effective instructional strategies, previously listed in the literature review, as identified in the McREL study. Additionally, the researchers also indicated that none of the identified strategies work all the time and in all circumstances.

Research in the area of effective instructional practice also included the study of pedagogy or “a combination of knowledge and skills required for effective teaching” (Chapuis, 2003). Others were of the same mind as it related to the importance of pedagogy to address the needs of all students (Dalton, 1998; Darling-Hammond, 1997a; Marzano, 2003). That said, Darling-Hammond (1997a) concluded that instruction was “effective or ineffective by the knowledge, skills and commitments of those in schools” (p. 7).

Additional Topics for Consideration

The final area of study relevant to an analysis of professional development models spoke to the area of systems thinking. The focus of systems thinking was to study how other elements of a system act upon the part of the system under study. Aronson (1996) noted “this results in sometimes strikingly different conclusions than those generated by traditional forms of analysis, especially when what is being studied is dynamically complex or has a great deal of feedback from other sources, internal or external” (Systems Thinking Approach section, ¶ 1).

Senge and associates. (2000) continuum of systems thinking practices included a number of genres. The authors pointed out “systems thinking is the study of system structure and behavior” (p. 78). In addition to their continuum of systems thinking practices, other models included Total Quality Management (TQM), and Continuous Quality Improvement (CQI). Some authors noted differences in the TQM and CQI models; however, whether the same or different, CQI/TQM principles, having been implemented in K-12 schools, were positively correlated with increased student achievement (Marshall et al., 2004; Wright et al., 2000).

Chapter 3

Research Design and Methodology

The chosen epistemology or theory of knowledge upon which this study was based lies in my best practice-based examination of professional development which posited this study in an epistemology of constructivism, “an epistemological concept underlying theories of how children, adults, and even organizations learn” (Lambert *et al.*, 2002). Even so, researchers were quick to point out the varying definitions and understandings of constructivism, thus the use of constructivisms was to reference the existence of multiple forms (Burbules, 2000); (Raskin, 2002). For the purpose of this research, knowledge development and maintenance were studied through the lens of “language, discourse, and communication,” (¶ 10) termed hermeneutic constructivism (Raskin, 2002). Another view of constructivism also attached to this study was the perspective “that knowledge is constructed [and] does not imply neither solipsism, nor radical relativism, since the problem of its truth is open to the public, that is, to the community of knowers —be them laymen or scientists” (Mazzotti, 1999). Given this theoretical perspective of knowledge, the choice of research design is now examined for the purpose of linking the procedures and techniques for gathering and analyzing data with desired outcomes of this study.

A mixed methods research design was employed to derive the greatest benefits of data collection strategies typical of the quantitative and qualitative research methods. Creswell (2003) pointed out the expanding use of data collection techniques associated with both methods of research in a single study. More

recently, Creswell and Clark (2007) defined the mixed methods research design as follows:

Mixed methods research is a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in many phases in the research process. As a method, it focuses on collecting, analyzing, and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone. (p. 5)

Using more than one method to study the same phenomenon can strengthen the creditability and dependability of results. “This approach - called triangulation - was most often mentioned as the main advantage of the mixed method approach” (Frechtling & Sharp, 1997). Another strength of this research design included a better understanding of the research problem (Creswell, 2003). The mixed method research design of this study was predicated on the philosophical ideas, strategies, and methods herein described. The following sections describe the data collection and analysis strategies and methods best suited for the study design.

Data Collection and Analysis

The data collection strategy of this study was best described as sequential explanatory, in that the quantitative component was intended to explicate the context and provide stimulus and momentum for the subsequent qualitative phase

of the study (Creswell, 2003). As the strategy name implied, the sequential explanatory strategy seeks to collect and analyze quantitative data followed by the collection and analysis of qualitative data (Creswell, 2003). By choosing the sequential explanatory design, the rationale for selecting participant school districts was informed and justified; and relationships between achievement and effective professional development practices can be explored.

Potential K-12 public school district sites were identified using descriptive statistics. Univariate analysis was used across all data sets. Univariate analysis described “each variable in a data set, separately” (Saint-Germain, 1997). Each data set was analyzed using the three major characteristics of distribution, central tendency, and dispersion (Calkins, 2005). The goal of these analyses was to identify representative K-12 public school districts to study that demonstrated consistently high achievement over time when compared to other sites in terms of enrollment size and student social economic status (SES). Trochim (2006a) indicated that despite the potential loss of meaning when describing a large set of data with a single indicator, “descriptive statistics provide a powerful summary that may enable comparisons across people or other units” (¶ 4). Given these premises, the bases for the selection of participating K-12 public school districts are explained in the next section.

Selection of Participating School Districts

I chose to study two K-12 Missouri public school districts, one large and one small. There were 524 public school districts for the school years 2001 through 2005, the five year span of data used for this study. Four hundred forty-eight of the

total public school districts in Missouri served students in grades K-12. The remaining 76 school districts either served student in grades K-8 or 9-12 only. This study was limited to the 448 K-12 public school districts. I determined that the study would be limited to only K-12 school districts as the greatest number of public school districts in Missouri were K-12 districts. Subsequently, more Missouri public school educators and students might benefit from the findings and conclusions of the K-12 study.

The selection of two K-12 school districts from among the 448 K-12 school districts was based upon an analysis of each district's (a) total student enrollment; (b) total percentage of students on free and reduced lunch, also known as social economic status (SES); (c) total percentage of students scoring advanced or proficient on state assessment tests in communication arts grades 3, 7, and 11; (d) total percentage of students scoring advanced or proficient on state assessment tests in mathematics grades 4, 8, and 10; and (e) total district expenditures per average daily attendance (ADA). The following sections will detail in order (a) access to and source of data, (b) district enrollment, (c) social economic status, (d) student achievement, and (e) district expenditures.

Access to and Source of Data. The selection of participant public school districts at which to study their professional development model commenced with the analysis of quantitative data sets gathered from the Missouri Department of Elementary and Secondary Education (DESE) Core Data Collection System database containing information on all 524 Missouri public school districts (Missouri Department of Elementary and Secondary Education, 2006a).

Commenting on quantitative data in social research, Babbie (2001) wrote, "Quantification often makes our observations more explicit. It also can make it easier to aggregate and summarize data. Further, it opens up the possibility of statistical analyses, ranging from simple averages to complex formulas and mathematical models" (p. 36).

The Missouri Department of Elementary and Secondary Education (DESE) collected data six times annually from all public school districts to "generate various state and federal payments and to determine compliance with state and federal statutes and regulations" (2007b). DESE maintained, for public access, five years of quantitative data on all public school districts in an electronic repository known as the Core Data Collection system that was accessed through their FTP download site (Missouri Department of Elementary and Secondary Education, 2006a). I used the FTP download site to collect data sets for all public school districts for each of the school years 2001 through 2005 for analysis and comparison in the selection of study sites.

District Enrollment. Having determined the study would be limited to K-12 public school districts, I next determined that the study would be limited to two K-12 public school districts; one large and one small based upon each districts average total student enrollment for the school years 2001 through 2005.

Having calculated the mean each district's enrollment for the school years 2001 through 2005, each district was associated with their respective total mean student enrollment and sorted largest total student enrollment to smallest total student enrollment. Mean district enrollment for the school years 2001 through

2005 ranged from the largest of 40,695 total students to the smallest of 100 total students K-12. The sum of all mean enrollments totaled 876,691. The mean enrollment for all K-12 districts was 1957 total students with a median total enrollment of 740.

The total number of districts with enrollments less than the mean enrollment of 1957 was 341 and these districts had a total combined student enrollment of 228,122. The 341 districts with enrollments smaller than the mean enrollment of 1957 accounted for slightly more than 76% of all K-12 public school districts and 26% of State's total public school student enrollment. Conversely, the total number of districts with enrollments greater than 1957 students equaled 107 K-12 school districts accounting for slightly less than 24% of the total K-12 school districts; however, total enrollment for the 107 largest districts equaled 648,567 or 74% of Missouri's total public school student enrollment.

I determined that a district would be classified as large if the total student enrollment of said district was greater than the average enrollment of 1957 students and a district would be classified as small if the district's enrollment was less than the average enrollment of 1957 students. I limited the study to two K-12 public school districts and used this classification system for several reasons.

The majority of K-12 public school districts in the state of Missouri are small; 341 out of a total of 448 for the school years 2001 through 2005, based upon the number of districts with total student enrollment less than the average K-12 public school district student enrollment of 1957. However, the vast majority of students attended the largest 107 districts with total student enrollments greater than the

average student enrollment of 1957 students for the school years 2001 through 2005. Additionally, this method of categorizing school districts was intended to provide a study that spoke to a broader audience of educators, those representing larger school districts and those representing smaller districts.

Finally, researcher time and resources for this study limited the study to two districts given the mixed methods research design. Following this district enrollment categorization methodology, I designated each K-12 school district as a member of one or the other group based upon their five year average total student enrollment for the purpose of selecting one participant district from each category. The next section speaks to the social economic variable used in the selection of study sites.

Social Economic Status. Student social economic status (SES) was reported for the school years 2001 through 2005 by each school district based upon the total population of students receiving free or reduced priced lunch as defined by state and federal guidelines. The value of the SES variable in the selection of participant school districts was related to the relationship of student achievement to poverty as measured by students receiving free or reduced priced lunch. Researchers indicated that the level of family poverty, as measured by students receiving free or reduced priced lunch, was often associated with lower student achievement (Hannaway, 2003; U.S. Department of Education National Center for Educational Statistics, 2006). Conversely, Darling-Hammond (2001) pointed out the impact of improving teacher quality through “teacher education, licensing, hiring, and professional development” (Abstract section), and the relationship of these efforts to improved

student achievement. Thus, school districts with higher levels of poverty and high levels of student achievement were most likely to have implemented effective professional development models.

I calculated the mean of each district's annual total percentage of students reported to have received a free or reduced priced lunch for the school years 2001 through 2005 to determine a mean SES variable for each of the 448 K-12 districts. Districts in each size category, that was the list of large K-12 districts and the list of small K-12 districts, were sorted from highest SES average to lowest SES average. SES percentages ranged from a low of 10% of all students that received a free or reduced price lunch to a high of 85% for the small districts. Large districts ranged from a low of 6% to a high of 83% of students that received a free or reduced priced lunch. Having determined the general wealth or poverty of student populations served by each of the K-12 districts, the next step used in selecting participating districts was to determine the highest performing districts as measured by student achievement on state assessment tests. The next section outlines the methods used to determine the level of student achievement for each K-12 public school district for the school years 2001 through 2005.

Student Achievement. The No Child Left Behind Act (NCLB) of 2001 requires all schools, districts and states to show that students are making Adequate Yearly Progress (AYP) (U.S. Department of Education, 2002). The Missouri Department of Elementary and Secondary Education (DESE) has identified the knowledge, skills, and competencies that Missouri students should acquire by the time they complete high school and subsequently developed a system to evaluate student progress

toward those academic standards based upon the rules of NCLB for meeting AYP. The DESE student assessment system known as the Missouri Assessment Plan (MAP) consisted of achievement tests in the subject areas of communication arts and mathematics as required by the MAP assessment program approved under the guidelines of the NCLB Act of 2001 (U.S. Department of Education, 2001; U.S. Department of Education, 2002).

During the school years 2001 through 2005 DESE administered the MAP communication arts and mathematics standardized and summative exams during a four week window each spring. Grade levels tested in communication arts for the school years 2001 through 2005 were grades 3, 7, and 11 while grades 4, 8, and 10 were tested in mathematics. Each of the MAP achievement tests required between three and five hours of test administration time and included three types of test items: selected-response items, constructed-response items, and performance events (CTB/McGraw-Hill, 2006). Student performance on each test was communicated as an aggregate achievement level termed from the lowest to highest levels of student performance (a) step-1, (b) progressing, (c) basic, (d) proficient, and (e) advanced. Each school and district's performance in relation to the DESE established annual proficiency targets were determined by totaling the percent of students who scored at the Proficient or Advanced levels on each of the MAP achievement tests (Missouri Department of Elementary and Secondary Education, 2006c). I obtained for analysis and comparison for selecting participating districts, the total percentage of students at each achievement level, for each grade level tested, on each MAP

achievement test for all 448 K-12 public school districts for the school years 2001 through 2005.

I used the student achievement variable to determine which school districts had higher levels of sustained student achievement across multiple years, grade levels, and subject areas. The first step in the process was to calculate the total percentage of students who scored advanced or proficient at each district disaggregated by achievement test, grade level, and school year. Each district was then listed with the total percentage of students scoring proficient or advanced for each achievement test by school year (e.g. 4th grade mathematics 2001, 4th grade mathematics 2002, 4th grade mathematics 2003, 4th grade mathematics 2004, and 4th grade mathematics 2005) (see Table A1¹). I then calculated the percentile rank for each grade level achievement test in a given school year for each district. This process resulted in a table listing all districts with their corresponding percentile values for each achievement test per grade level, per year (see Table A2).

Each achievement test for each year was then sorted from highest to lowest by percentile rank and assigned a value from 1 to 448 with the value 1 assigned to the district that had highest percentile rank on each achievement test in a given school year and the value of 448 was assigned to the district with the lowest percentile rank on each achievement test in a given school year (see Table A3 & A4). This process resulted in a table listing all districts with their corresponding

¹ All tables referenced herein are included in the appendices.

percentile ranking from 1 to 448 for each MAP achievement test at each grade level and for each school year 2001 through 2005 (see Table A5).

I used percentile ranking to indicate those K-12 school districts that had the highest student achievement when compared to all other school districts on the same test, at the same grade level, during the same year. For example, a district that was in the 96th percentile on the 10th grade MAP mathematics assessment in 2001 would have scored better than approximately 95.9% of all other districts on the 2001 10th grade mathematics MAP assessment. By using this method, it allowed me to rank all districts from highest to lowest on all MAP achievement tests for each grade level in each school year 2001 through 2005.

I then calculated a mean for the sum of each district's rank order numbers, for each MAP achievement test at each grade level, for all years 2001 through 2005. This resulted in a single number representing each MAP achievement test at each grade level over time, which was for the years 2001 through 2005. For example, if a district ranked 10th, 33rd, 4th, 29th, and 50th for the years 2001 through 2005 respectively on the 4th grade mathematics MAP achievement test, said district would have been assigned the rank of 25.2, calculated $(10+33+4+29+50)/5$, representing their average 4th grade mathematics MAP achievement. This calculation was done for each grade level MAP achievement test by averaging the rank of each year 2001 through 2005.

Following the calculation of a single value to represent the 2001 through 2005 achievement level for each grade level MAP achievement test, I then calculated a single value to represent each content area, mathematics and

communication arts. This was the same calculation method used to derive a single value to represent each grade level MAP achievement test for the years 2001 through 2005. For example if a district rank, now calculated as a single value for the years 2001 through 2005 combined, on the 4th, 8th and 10th grade mathematics MAP achievement test was 25.2, 60.4 and 17.6 respectively, said district would be assigned a rank of 34.4, calculated $(25.2+60.4+17.6)/3$, representing their mathematics achievement for all grade levels tested in mathematics, across all years 2001 through 2005. The same calculation was performed to arrive at a single value for the districts communication arts MAP achievement as well.

The final step in the process of determining each district's student achievement was to calculate the mean rank for both the mathematics MAP and the communication arts MAP. For example if after all the previous calculations had been performed a district's mathematics MAP achievement rank was 34.4 and their communication arts MAP achievement was 128.9, the district would be assigned a student achievement value of 81.7, calculated $(34.4+128.9)/2$ representing the districts student achievement across all grades, all tests, and all years (see Table A3).

In addition to the analysis of school district enrollment, district poverty, and student achievement, the final data set for analysis was the current expenditures per average daily attendance (ADA). The next section defines ADA and how it was used for this study.

District Expenditures. Current expenditures per average daily attendance is a single dollar amount calculated for each school district on an annual basis. I

obtained and analyzed this dollar amount for each of the 448 K-12 public school districts for the years 2001 through 2005. Two definitions were important to understanding the financial data set termed *current expenditures per ADA* [Average Daily Attendance]. The first term *current expenditures* was defined as all district expenditures (Missouri Department of Elementary and Secondary Education, 2006b, Slide 96 notes section). The second term, ADA or average daily attendance was based upon actual student attendance hours divided by the total hours in session for the calendar year (Quinn & Ogle, 2006).

A single value was calculated for each district by averaging the five annual current expenditures per ADA. I used this data to compare the spending of one district to another. The final selection of participating districts was based in part on districts with similar current expenditures per ADA to minimize unequal funding accounting for study findings, notwithstanding the fact that researchers are mixed on the relationships between school funding and student achievement (Biddle & Berliner, 2002; Lockwood & McLean, 1993).

Site Selection Summary

The selection of participant Missouri school districts at which to study their professional development model commenced with the analysis of quantitative data sets gathered from the Missouri Department of Elementary and Secondary Education (DESE) Core Data Collection System database containing information on all 524 Missouri public school districts (Missouri Department of Elementary and Secondary Education, 2006a). The selection of two K-12 Missouri public school districts from among the 448 K-12 Missouri public school districts was based upon

an analysis of each districts (a) total student enrollment; (b) total percentage of students on free and reduced lunch, also known as social economic status (SES); (c) total percentage of students scoring advanced or proficient on state assessment tests in communication arts grades 3, 7, and 11; (d) total percentage of students scoring advanced or proficient on state assessment tests in mathematics grades 4, 8, and 10; and (e) total district expenditures per average daily attendance (ADA). A univariate analysis of each variable using the measures of mean, median, and standard deviation were used to generate data for a comparison of school districts.

I selected two districts to participate in the study, one large district and one small district, each having consistently high achievement across multiple grade levels, content areas, and years as measured by the Missouri Assessment Plan (MAP) and a high percentage of students that received free or reduced priced lunch. Each district superintendent agreed to participate in the study and indicated so with their signature on a memorandum of agreement (see Appendix B). The selection of participating K-12 school districts represented a portion of the quantitative phase of the proposed mixed-methods research design. The final stage of the quantitative data collection process was the administration of an online professional development survey. The survey instrument and procedures for administration of same are described in the next section.

Professional Development Survey

An online survey was used in an attempt to survey the entire population of all certified teachers in the selected K-12 school districts. The online survey enabled me to ascertain the thoughts and perceptions of respondents pertaining to the

professional development model of each selected K-12 school district. Researchers also indicated in comparisons of electronic v. postal surveys “that electronic survey content results may be no different than postal survey content results, yet provide strong advantages of speedy distribution and response cycles” (Andrews *et al.*, 2003; Yun & Trumbo, 2000).

I used an Application Service Provider (ASP) which denotes a company “that provide[s] services via the Internet. In most cases, the term ASP has come to denote companies that supply software applications and/or software-related services over the Internet” (HowStuffWorks Inc, 2006). I used the ASP SurveyMonkey (2006) survey software to administer the survey. Respondents were sent an email communication (see Appendix C) describing the study, requesting input on their district professional development practices, and instructions on completing the survey, including a timeline for completion. Additionally, the email communication provided a URL address from which each respondent accessed and took the survey via the internet using a web browser. Andrews, Nonnecke, and Preece (2003) argues “Web-based surveys are superior to email surveys in many aspects, but that email combined, perhaps with offline media, is an excellent vehicle for inviting individuals to participate in Web-based surveys” (p. 2).

SurveyMonkey held a current *Safe Harbor* certification granted by the U.S. Department of Commerce (2006). Said certification indicated that SurveyMonkey complied with the seven required principles of Safe Harbor. Two of the seven required principles are germane to this study: (a) security and (b) data integrity. These principles were defined as follows:

Security: Organizations must take reasonable precautions to protect personal information from loss, misuse and unauthorized access, disclosure, alteration and destruction.

Data integrity: Personal information must be relevant for the purposes for which it is to be used. An organization should take reasonable steps to ensure that data is reliable for its intended use, accurate, complete, and current. (U.S. Department of Commerce, 2006).

I was granted permission by the National Staff Development Council (see Appendix D for NSDC permission letter) to administer their copyrighted professional development survey developed by Lowden (Lowden, 2005) (see Appendix E). Lowden (2005) explained the development and format of the survey instrument as follows:

Section One of the instrument contained background information questions that collected descriptive data about school variables including: the professional development process, format, and content.

Section Two of the instrument contained questions that determined the teachers' perceptions of professional development at six levels:

1) participant satisfaction, 2) participant learning, 3) organizational support and change, 4) change in teacher knowledge, skills, and instructional pedagogy, 5) teacher perception of student learning, and 6) changes in attitudes and beliefs of teachers (Model of Teacher Change section).

Lowden (2005) indicated "Content and face validity were established through a jury of experts in the field of education and professional

development.” (p. 3) Additionally, the survey was based on the literature of the five critical levels of evaluating professional development and Guskey’s *Model of Teacher Change* (2000).

Descriptive statistics were used to describe survey respondents and provide analyses of the various components of each selected school district’s respective professional development model. Univariate analysis was used to analyze the collective survey responses data set. The data set was analyzed using the three major characteristics of distribution, central tendency, and dispersion (Calkins, 2005). The goal of these analyses was to assist in the identification of those components of the professional development model in the selected school districts that most contribute to the implementation of effective instructional practice. Trochim (2006a) indicated that despite the potential loss of meaning when describing a large set of data with a single indicator, “descriptive statistics provide a powerful summary that may enable comparisons across people or other units” (§ 4).

This concludes the description of the professional development survey process and signals the beginning of the qualitative phase of the sequential explanatory design. The following sections outline the qualitative data collection and analysis methods of the proposed study.

Document Review

Documentation required by the DESE as well as other documents related to district professional development were collected and reviewed. From these documents details regarding the selected district and the organizational design of effective professional development in selected K-12 Missouri public school districts

were extrapolated. Essential documents included (a) Missouri School Improvement Program (MSIP) advanced questionnaires; (b) school data and statistics downloadable from the Missouri Department of Elementary and Secondary School (DESE) web site (2007c); (c) the district professional development plan; (d) individual school improvement plans; (e) a sampling of teacher individual development plans; (f) past professional development activity agendas, and; (g) evaluations of professional development activities.

Document review provided several advantages in the field of inquiry. Patton (1990) affirmed that document analysis “provides a behind-the-scenes look at the program that might not be directly observable and about which the interviewer might not ask appropriate questions with the leads provided through the documents” (p. 245). Documents were reviewed using content analysis and provided rich information, which “does not react to the researcher’s presence or initiatives” (Erlandson et al., 1993). I reviewed each document, evaluated the information it contained, and analytically identified contents of the documents that pertained to the research questions or were used in the description of selected sites.

This section presented an overview of the needed documents and document review procedures conducted. The next section features information about focus groups.

Focus Groups

I organized two focus groups representative of selected certified teachers as the best means of obtaining initial answers to the research questions. By engaging groups of 6 to 12 homogeneous participants in a guided discussion, in-depth

information was obtained in a short amount of time (Scheuren, 2004). According to Babbie (2001), “Group dynamics frequently bring out aspects of the topic that would not have been anticipated by the researcher and would not have emerged from interviews with individuals” (p. 294). The focus group participants also assisted me in the selection of individual participants for personal interviews as well as the issues to pursue in said interviews (Bogdan & Biklen, 1998).

I conducted two focus groups at each school district. One focus group representing elementary certified teachers and the other secondary certified teachers. Building principals and district administrators were asked to recommend certified teacher focus group participants based upon a combination of purposive sampling techniques. Certified teachers were selected using a combination of purposive sampling techniques: Nonproportional quota sampling and expert sampling.

The use of nonproportional quota sampling provides a sample approximating the characteristics of the population of all certified district staff (Trochim, 2006b). The use of the expert sampling technique will provide a focus group representing a sample of persons with known or demonstrated experience and expertise in their district professional development (Trochim, 2006b). By combining these two sampling techniques in the selection of certified teaching staff, I engaged focus groups representative of their respective staff demographics and experts in the district’s professional development. This enabled me to facilitate a process with each focus group to develop a reliable graphical representation of their consensus professional develop model.

Trochim's (2006b) description of nonproportional quota sampling was analogous to Patton's (1990) stratified purposeful sampling case intended to generate a sample characteristic of particular subgroups of interest that allowed me to facilitate comparisons. Patton (1990) described another purposive sampling case termed *criterion* intending that the researcher picks subjects that meet some criterion, similar to Trochim's (2006b) expert sampling technique. By using these sampling techniques in combination I was able to strengthen the credibility of data through triangulation (Patton, 1990).

The focus group interview protocol (see Appendix F), adapted from Gurley's (2000) dissertation protocol, consisted of a researcher facilitated activity and a set of open-ended questions asked by a moderator. I chose focus groups to aid in the development of the selected district's consensus professional development model in addition to determining perceptions and effectiveness of professional development in the selected K-12 school districts based upon participant opinion. The research facilitated activity resulted in the development of a graphical representation of the district's professional development model. Each focus group participant was then given the opportunity to affirm the accuracy of the model. Each model was then modified until the focus group participants reached agreement by consensus thus resulting in the consensus professional development model for each focus group. After the development of the consensus professional development model, I recorded each focus group discussion. Recorded discussions were transcribed and a typed transcription of each focus group discussion was emailed to each of the respective participants (see Appendix I - participant transcript member check email). This

form of member checking with each focus group was to ensure credibility of the data. Lincoln and Guba (1985) defined member checks as asking research participants to confirm that the researcher has accurately recorded the participant's experience.

This section identified the use and purpose of focus groups to collect data. Following is a rationale for the use of and the data sought using personal interviews.

Personal Interviews

The emergent design of the study assisted by my inquiry of literature, relevant documents, and focus group participants logically led to a pertinent and in-depth probe of individual perceptions relating to effective professional development models and the consensus professional development model in the selected K-12 Missouri public school districts. Subjects were purposively selected based upon their knowledge of their school district's professional development program based upon a consensus of focus group and administrative recommendations. Erlandson and associates. (1993) stated, "Perhaps the best way to elicit the various and divergent constructions of reality that exist within the context of a study is to collect information about different events and relationships from different points of view" (p. 31). Interviews were one way of collecting divergent views about effective professional development models in the selected K-12 school districts.

The protocol, a set of open-ended questions, (see Appendix G) adapted from Gurley's (2000) dissertation protocol, provided a structure to guide the interviews. These questions sought information regarding perceptions held by selected district

personnel who had an understanding of professional development and the organizational design of their respective professional development activities.

A pilot test of the interview protocol was conducted with educational personnel not employed in the districts involved with the study (Joint Committee on Standards for Educational Evaluation, 1994). Suggestions received during the pilot test aided in the restructuring of the interview questions. Additionally, I conducted member checks with each interviewee to ensure credibility of the data. Erlandson and associates. (1993) maintained support for consistent use of member checks:

Because the realities that will be included are those that have individually and collectively been constructed by persons within the context of the study, it is imperative that both data and interpretations obtained be verified by those persons. No data obtained through the study should be included in it if they cannot be verified through member checks. (p. 31)

Although verification of the data source was imperative, confidentiality of all data related to the research project was maintained (Babbie, 2001; Erlandson et al., 1993).

This section described the data sought and the methodology of personal interviews. The next section describes the trustworthiness of data and findings from the various data collection strategies.

Trustworthiness of Data

This section of the study is intended to inform the reader as to the procedures and techniques I used to ensure a high probability of data and findings credibility or truth in the context of this study. Although different terminology is used throughout the literature, credibility or truth were intended to imply the trustworthiness of the data and findings. Erlandson and associates, (1993) in their work on naturalistic inquiry discussed the establishment of trustworthiness in terms of “techniques that provide truth value” (p. 132). Speaking specifically on mixed methods research, Creswell (2003) discussed “a series of steps taken to check the validity of data” (p. 221). The following sections outline the steps used by the research to ensure a high probability of trustworthiness in the study data, findings, and conclusions.

Triangulation. I used triangulation as one way to increase the trustworthiness of findings, following data collection. Triangulation was a comparison of information from different data-collection methods and sources that lead to better judgment of the subject matter that was studied (Bogdan & Biklen, 1998). Erlandson and associates. Erlandson and associates (1993) stated, “the greater the convergence attained through the triangulation of multiple data sources, methods, investigators, or theories, the greater the confidence in the observed findings” (p. 139).

I interpreted the findings by categories from all inquiry methods. Sandelowski (2000) indicated quantitative and qualitative data sets can be linked while “preserving the numbers and words in each data set” (p. 252). The combining of the quantitative and qualitative data sets was accomplished at the interpretive

level of research within each category. I considered common attributes among the data sets. Conclusions were formed based on the findings that emerged in a number of different categories. Finally, I used this information to form recommendations related to the research questions.

Peer Debriefing. I was fortunate to work with a number of professionals, recognized at the state or national level for their expertise in professional development or research design. Peer debriefing provided me with frequent opportunities to discuss ideas and concerns with these professional colleagues who were experts in the field of professional development, research design or data analysis, respectively. Each contributed to the quality and improvement of the study and was consulted throughout the course of the study. Erlandson and associates (1993) state, “peer debriefing helps build credibility by allowing a peer...to analyze materials, test working hypotheses and emerging designs, and list to the researcher’s ideas and concerns” (p. 140).

Member Checks. Member checks provided study participants the opportunity to review study data and interpretations prior to the completion and submission of the study. My intent was to enhance the credibility of the study by engaging research participants in analyzing data and confirming the findings. Erlandson and associates (1993) commented on member checking as a means of providing “credibility by allowing members of stakeholding groups to test categories, interpretations, and conclusions” (p. 142).

Focus group interview and personal interview transcripts were provided electronically to individual study participants. I encouraged participants to respond

with any corrections or questions regarding their individual interview transcripts (see Appendix H). Email responses and subsequent phone calls to district leadership from confirmed that all participants had reviewed interview transcripts.

Participants who responded to the member check email typically provided minor corrections which I noted in the corresponding focus group interview transcript or personal interview transcript.

Additionally, the study findings and conclusions were provided to their respective participating district leadership for distribution among study participants. I provided study participants the opportunity for feedback on the accuracy of the findings and conclusions (See Appendix I). Suggested changes from study participants were incorporated into the final study.

Audit Trail. The audit trail was intended to “make it possible for an external check” of the researcher’s processes that were used in the study and “to allow an external reviewer to make judgments about the products of the study” (Erlandson et al., 1993, p. 34-35). This section of the study outlines the processes used for the study and the means of making the study data sources and products available for review. The following paragraphs detail the audit trail with a brief recap of each data collection strategy and processes used to strengthen the trustworthiness of the study.

The initial quantitative phase of the study involved site selection based upon a statistical analysis of five variable (a) total student enrollment; (b) total percentage of students on free and reduced lunch, also known as social economic status (SES); (c) total percentage of students scoring advanced or proficient on state

assessment tests in communication arts grades 3, 7, and 11; (d) total percentage of students scoring advanced or proficient on state assessment tests in mathematics grades 4, 8, and 10; and (e) total district expenditures per average daily attendance (ADA). These data sets were analyzed electronically and all files were electronically retained on my home computer as well as backed up to other media for storage as required by the Institutional Review Board of Wichita State University.

The second and final phase of the quantitative data collection strategy included an online professional development survey developed by Lowden (2005) and used with the permission of the National Staff Development Council (see Appendix D). Lowden (2005) indicated that the survey “content and face validity were established through a jury of experts in the field of education and professional development” (p. 3). I used the ASP SurveyMonkey (2006) survey software to administer an online electronic survey. This tool provided me with options to download data for additional analysis. All data has been downloaded from the ASP to my home computer and said files remain on file and backed up to provide additional assurances of future availability and security of data.

I reviewed documents, conducted focus group and personal interviews as data collection methods in this study. Upon completion of the document review, interviews and focus groups, data were examined using constant comparative analysis methodology developed by Glaser and Strauss in 1967 (Babbie, 2001; Erlandson et al., 1993). Comparative analysis required data to be unitized. Erlandson and associates (1993) defined unitizing as “disaggregating data into the smallest pieces of information that may stand alone as independent thoughts in the

absence of additional information other than a broad understanding of the context” (p. 117). All interviews were recorded and transcribed. All interview tapes, researcher notes, documents and electronic transcriptions have been retained and secured at my home.

Summary of Research Design and Methodology

This chapter of the study examined the research design, data collection, data analysis, and supporting theory. The chapter began with a description of the constructivist theory that supported the use of the chosen mixed methods research design. This was followed by an explanation of the sequential explanatory strategy of inquiry “characterized by the collection and analysis of quantitative data followed by the collection and analysis of qualitative data” (Creswell, 2003, p. 215).

The next section of the chapter detailed the selection process for choosing two K-12 Missouri public school districts based upon an analysis of each districts (a) total student enrollment; (b) total percentage of students on free and reduced lunch, also known as social economic status (SES); (c) total percentage of students scoring advanced or proficient on state assessment tests in communication arts grades 3, 7, and 11; (d) total percentage of students scoring advanced or proficient on state assessment tests in mathematics grades 4, 8, and 10; and (e) total district expenditures per average daily attendance (ADA). Each of these variables was described in detail including their respective source and how each was statistically analyzed to derive the two selected sites, one large district and one small district, based upon the best combination of variables for the purpose of the study.

The selection of participating K-12 school districts represented a portion of the quantitative phase of the proposed mixed-methods research design. The final stage of the quantitative data collection process was the administration of an online professional development survey. All certified teachers in the selected K-12 school districts were provided an opportunity to participate in the study by taking a survey developed by (Lowden, 2005) and used with the permission of the National Staff Development Council (see Appendix D) The survey enabled me to ascertain the thoughts and perceptions of respondents pertaining to the professional development model of each selected K-12 school district. Descriptive statistics were used to describe the survey respondents and provide analyses of the various components of their respective professional development model.

The description of the professional development survey process concluded the quantitative phase of the sequential explanatory inquiry strategy. The next sections of the Chapter outlined the qualitative data collection and analysis methods of the proposed study. The following qualitative data collection strategies were used for this study (a) documents review, (b) focus group interviews, and (c) personal interviews. Each of these data collection sections of the chapter described the data collection method processes and analysis techniques. The chapter concluded with a discussion of the study methods used to verify the data, findings, and conclusions to ensure the credibility or trustworthiness of the study.

The following Chapters of the study detail the findings, conclusions, and implications of the study. Chapters 4 and 5 each detail the selected K-12 school districts. Chapter 4 describes the selected small district, pseudonym Lakeside R-I.

Chapter 5 describes the selected large district, pseudonym Plainview R-II. Each chapter contains a thick description of the respective district. The data collected in the quantitative phase of sequential explanatory design along with the data analysis and findings gleaned from the final and qualitative data collection phase in the sequential explanatory design are presented for the corresponding district in each chapter as well. Chapter 6 presents a synopsis of the study. It includes conclusions and implications predicated upon the findings in the two previous chapters and the literature review. The study concludes with implications for future research.

Chapter 4

The Story of Lakeside R-I

This study was limited to two Missouri K-12 public school districts, one small and one large, that demonstrated consistently high achievement over time when compared to the other 448 Missouri K-12 public schools in terms of enrollment size and student social economic status (SES) during the five year period of 2001 through 2005. Schram (2003) indicated the importance of detailing the setting of the study in site specific research to convey the “scope and boundedness” (p. 168) of the setting. Discussing the use of thick description, Erlandson and associates (1993) also confirmed the need for ample detail regarding a description of the study site in order to provide adequate detail from which others might make decisions regarding the transferability of the study judgments to their own setting.

This chapter begins with description of the community, surrounding area and school district; Lakeside R-I, the selected Missouri K-12 small public school district. Included in these descriptions are the demographics, economy, and statistical information from the Missouri Census Data Center (2007) and DESE (2007c). Additionally, the findings from an analysis of the district’s (a) total student enrollment; (b) total percentage of students on free and reduced lunch, also known as social economic status (SES); (c) total percentage of students scoring advanced or proficient on state assessment tests in communication arts grades 3, 7, and 11; (d) total percentage of students scoring advanced or proficient on state assessment tests in mathematics grades 4, 8, and 10; and (e) total district expenditures per average daily attendance (ADA) are also presented.

Following these descriptions of the community, surrounding area and school district, is a recap of the research question that guided this part of the study. The data collection methods and analysis processes are then briefly outlined along with an overview of the findings. The remainder of the chapter details each of the findings along with themes and categories that emerged from the data.

Lakeside and Surrounding Area

Lakeside R-I school district was situated in small rural Missouri community, herein pseudo named Lakeside, near the mid section of the state. The community of Lakeside was established in the mid 1800s and was shortly thereafter the home of a large contingent of European immigrant farmers. This strong European heritage continued to thrive and was actively celebrated in Lakeside. Education was important to Lakeside residents as well, as exemplified by the first school that was established in the mid 1800s shortly after settlement.

Church life also appeared important to the earliest settlers of Lakeside with the establishment of several churches whose cemeteries remained a point of interest for Lakeside residents and visitors. This was further illustrated by the establishment of a church affiliated school that has been in operation for over 100 years serving the needs of Lakeside and surrounding area students in grades 1 through 8 with “formal religious instruction as well as instruction in almost all subjects normally connected with an elementary school.” A church affiliated school for preschool through kindergarten aged students established over 20 years ago was also in operation. Recent data indicated there were slightly over 100 students

enrolled in these schools. Furthermore, there were 17 churches for worship to meet the needs of most faiths in or near the Lakeside community.

The Lakeside community continued to reflect its strong European heritage in a 98% white population and inhabited by just over 1,000 residents from among over 4,000 persons residing within the boundaries of the school attendance area and a surrounding county population of over 18,000. The town of Lakeside had experienced a slight decline in population in recent years; however, census projections indicated anticipated growth of approximately 1%. The Lakeside attendance area and the county experienced recent growth of approximately 10% based upon U.S. census data. Census data also predicted continued population growth for the county and the surrounding Lakeside area. The most recent census data described an experienced community having approximately 57% of the population over age 64 compared to a 25% population under 17 years of age. Interestingly, Lakeside's self published information boasted of a higher than average population of single females. Census data would indicate many of whom were widowed or single moms.

The Lakeside business community was dominated by a number of small retail outlets, particularly those catering to the antique or arts and crafts shopper. A surprisingly diverse selection of service businesses compared to other similar sized rural communities in Missouri was available to Lakeside residents. Among those services available included financial, insurance, automobile repair professional photography, drilling, bulldozing, bed and breakfast, and restaurants to name some.

Local and county unemployment levels were slightly above the state average of 5.4%. Data from local sources and the most recent census data corroborated that most residents were commuters with employment outside the immediate area. This seemed to explain the predominance of the manufacturing industry as the primary employment industry sector followed by a distant and relative tie for second among retail trade, health care and social services that were just ahead of education as the major employment industry sectors for the community. While these were the primary industries of employment, the reader is cautioned to consider that the primary occupation from among these industries was first listed as management, sales, and related occupations followed closely and listed second as sales and office occupations which combined accounted for over 40% of the work force by occupation. Average household income estimates ranged from a low of \$28,000 to a high of \$38,000 dependent upon the source and reporting timeframe.

Housing had been relatively stable in terms of available units and occupancy. Over 70% of all housing units were reported to be owner occupied. Median home values were reported just above \$65,000 with over half of all homes reported in the range of \$55,000 to \$100,000. Forty-five percent of all units were reported to be over 50 years old.

The majority (68%) of the Lakeside attendance area residents over 25 years of age reported not having attended college. Nearly 13% of the same population reported less than a 9th grade education; this also matched the 13% of persons over 25 years of age reported to be living below poverty. However, some reportedly

attained their GED as illustrated by 38% that reported attaining high school graduation or a GED.

This section depicted the Lakeside community and surrounding area. The Lakeside community and surrounding area was described as an old rural community steeped in its European heritage and traditions. What follows is a description of the Lakeside R-I school district, a small Missouri K-12 public school district.

School District

Lakeside R-I was a small K-12 district serving an average student enrollment of over 700 students on a single campus setting. Although grades K-12 were housed in a single structure, the building was clearly divided into three sections, one for each grade level configuration K-5, 6-8, and 9-12 respectively. Each of the three separate grade level configurations had their own principal. The superintendent of schools was housed in the school building as well. A contact person was listed as the professional development chair; however, said individual was a full time teacher as well. I observed the school building was in generally good condition and appeared to be well maintained.

Property values, from which Lakeside R-I has derived an increased percentage of their total revenue, increased from over 34 million to just over 40 million in the last five years ending June 2006. In spite of their increased dependence on local funding sources, the Lakeside R-I adjusted tax rate trended slightly down over the same time period and was at \$3.2092 per \$1,000 of assessed valuation. This was down from the \$3.34 rate of 2003. A reduced debt service levy

accounted for this change. Even at its highest, the Lakeside R-I's combined incidental and debt service tax levies were below state averages since 2003 for the same combination of state tax rates. This was reflected in Lakeside's increased dependence on local revenue funding sources that were 47.1% of all funding sources in 2006, up from 43.8% in 2002.

Teacher and Administrative salaries had trended up over the last five years ending June 2006. However, this trend continued to remain below state averages for the same reporting periods. The Lakeside R-I average total teacher salary was reported at just over \$37,000 and the average administrator salary was reported at just below \$63,000. This was compared to state averages of \$42,077 and \$75,236 respectively.

Experience in the district varied among the district leadership. The elementary principal had the most in-district experience with 21 years. The superintendent had been in the district for 13 years. The middle school and high school principals each were listed with 3 years in-district experience. However, other documentation indicated the high school principal had previously taught 7 years in Lakeside R-I before leaving for another Missouri district administrative position and then returning to assume the Lakeside R-I high school principalship.

The average experience of professional staff was reported to be just over 13 years, slightly higher than the Missouri average. However, this was more a function of the variance in the staff experience rather than a reflection of the actual experience of the staff. In truth, 47% of the professional staff reported teaching experience between 0 and 10 years with 21% at zero to five years experience and

26% reported at 6 to 10 years of teaching experience. At the other end of the spectrum, 39% of the professional staff reported teaching experience greater than 15 years.

Likewise, the Lakeside R-I staff certification status was higher than the Missouri average certification status reported as a single annual percentage. The average percentage of the Lakeside R-I teachers with regular certificates reported over the last five years varied between a low just above 97% to a high of 100%. In the same timeframe, the DESE Educator Certification System also reported classes taught by highly qualified teachers ranged between 97% and 99% of Lakeside R-I teachers. While the percentage of staff with advanced degrees has increased over the same time period, the 45% of staff reported with advanced degrees in 2006 was below the state average of 50% of staff with advanced degrees for the same reporting period.

The smaller enrollment of Lakeside R-I afforded the district an opportunity to maintain relatively low students to classroom teachers ratio. Student to teacher ratios ranged between a low of 16 to a high of 19 students per teacher for the school years 2002 through 2006. The most recent data reported a student to teacher ratio of 17 to 1 for the school year ending June 2006, slightly below the state average of 18 to 1. The students to administrator ratio were reported the lowest in the last five years ending June 2006 at a level of 136 to 1. This rate was below the state average of 203 to 1. This rate; however, was a function of the lowest reported enrollment in the last five years while the administrative staff numbers remained constant for the same time period.

Lakeside R-I student attendance rates were relatively constant over the last five years and ranged from 95.2% to 95.4%. This was against a backdrop of average state attendance rates that trended slightly down each year for the same time period and was most recently reported at 94%. Conversely, Lakeside R-I graduation rates had trended up to a high of 100% in 2005 and were reported at 91.8% in 2006. This was compared to a low graduation rate of 86.2% in 2002. The inverse has been true for the Lakeside R-I dropout rate which has trended up in the last five years reported most recently at 4.2% in 2006. Generally between 50% and 65% of Lakeside R-I graduates reported attending a 2 year or 4 year college or university upon graduation in the reporting years 2002 through 2006. However, caution must be exercised in evaluating any of these student numbers relative to the small student enrollment of Lakeside R-I.

This section described the Lakeside R-I school district. Lakeside R-I was characterized as a small rural district with an experienced administrative staff and a teaching staff well represented by veteran teachers that may be nearing retirement. It appeared that the cycle of retiring teachers had previously begun as exemplified by the percentage of teachers reported with less than six years experience. It also appeared that the trend upward in average teacher pay was more a function of an aging teaching staff than increased compensation. Property taxes were relatively stable, yet below state averages. Student engagement appeared high based upon average daily attendance rates and the graduation rates as well as being supported by low student to teacher ratios. Finally, student post

secondary pursuits were reported as equally split between continued educational endeavors and other interests.

Thus far I have described the contextual setting for one of the two selected sites for this study, the small Missouri K-12 public school district selected for this study, pseudo named Lakeside R-I. The selection of Lakeside R-I was based upon an analysis of a number of variables available for download through a DESE web site (Missouri Department of Elementary and Secondary Education, 2006a). What follows are the analysis and findings related to each variable that led me to select for the purpose of this study Lakeside R-I, a small Missouri K-12 public school district.

Lakeside R-I Quantitative Site Selection Variables

This study was conducted in two high performing, low SES K-12 Missouri school districts, one large and one small. Germane to this section of the study detailing the small K-12 Missouri public school district was the following research question that guided the study:

1. What did teachers in a small high performing, low SES district identify as the critical components of their professional development model for student success?

Recall that while this study was not intended as an evaluation of the professional development models in the selected sites, rather the premise of this study was based upon (a) the identification of selected Missouri K-12 public school districts, which had significantly higher student achievement when compared to other Missouri K-12 public school districts; (b) researchers who indicated that the

level of family poverty, as measured by students receiving free or reduced priced lunch, was often associated with lower student achievement (Hannaway, 2003; U.S. Department of Education National Center for Educational Statistics, 2006); (c) findings from researchers who concurred on the importance of student outcomes as the basis for measuring effective professional development (Elmore, 2002; Joyce & Showers, 2002); and (d) the impact of improving teacher quality through “teacher education, licensing, hiring, and professional development” (Darling-Hammond, 2001, Abstract section). Thus, school districts with higher levels of poverty and high levels of student achievement were most likely to have implemented effective professional development models.

Based upon these premises, I identified the study site using five variables: (a) total student enrollment; (b) total percentage of students on free and reduced lunch, also known as social economic status (SES); (c) total percentage of students scoring advanced or proficient on state assessment tests in communication arts grades 3, 7, and 11; (d) total percentage of students scoring advanced or proficient on state assessment tests in mathematics grades 4, 8, and 10; and (e) total district expenditures per average daily attendance (ADA). The following sections will detail in order (a) district enrollment, (b) social economic status, (c) student achievement, and (d) district expenditures. The student achievement section combines the communication arts and mathematics achievement tests. Based upon these variables used for site selection, this section details the analysis and findings upon which the small K-12 public school district was selected. These variable data sets were gathered from the Missouri Department of Elementary and Secondary

Education (DESE) Core Data Collection System database containing information on all 524 Missouri public school districts (Missouri Department of Elementary and Secondary Education, 2006a). This study was limited to the 448 Missouri K-12 districts; the remaining 76 districts were configured as K-8 or 9-12 districts. The next section details the analysis and findings from each of the five variables. All specific statistics that reference Lakeside R-I are generalized to protect district confidentiality.

Student Enrollment. Lakeside R-I enrollment over the time period 2001 through 2005, averaged nearly 770 students. The Lakeside R-I average enrollment of 770 classified Lakeside R-I among the other 341 small school districts, based upon the methodology as outlined in Chapter 3. In a simple ranking from 1 to 341 with 1 the smallest average district enrollment and 341 the largest average district student enrollment in the small district category, Lakeside R-I ranked in the 230s. The mean student enrollment for all 448 K-12 public school districts during the same time period was 1957 and the median student enrollment was 740. This was particularly pertinent as it strengthened the possible for the transferability of findings and conclusions to a potentially larger number of other Missouri K-12 public school districts, given the proximity of the mean Lakeside R-I student enrollment to the median state student enrollment number for the period 2001 through 2005.

The category of small K-12 public school districts included 341 districts that ranged in average total enrollment from the smallest of 100 students to the largest of 1951 students. The standard deviation for the small district category was 443.

Given this rather wide variation or standard deviation in small district category, the strength of the Lakeside R-I selection was buttressed in that the mean enrollment for the category of small school districts was 669 students and the median enrollment was 572 students for the same category of school districts.

Social Economic Status. The mean percentage of students who received a free or reduced price lunch, herein referenced as SES percentage, for the time period 2001 through 2005 at Lakeside R-I was 42%. This was slightly below the small district category SES mean of 47%; however, the standard deviation for the small district category SES percentage was 14 for the same time period. The mean district SES percentage ranged from a low of 8% to a high of 85% among all 341 K-12 districts in the small district category. The mean SES percentage for all 448 K-12 districts was 44% with a standard deviation of 15 for the period 2001 through 2005. In a simple ranking from 1 to 331 with 1 representing the district with the lowest SES percentage and 331 representing the district with the highest SES percentage among all 331 K-12 small public school districts, Lakeside R-I ranked in the 110s.

Again, the choice of Lakeside R-I as a small district school study site was strengthened by the proximity of the Lakeside SES mean to the small district category SES mean as well as the all district SES mean. Given the variance or standard deviation in the SES data sets across both the small district category and the all district category, the Lakeside R-I SES mean clearly fell within the range of plus or minus one standard deviation. Additionally, the Lakeside SES mean was close enough to the mean in both data sets to indicate that the Lakeside R-I SES percentage of 42% was representative of the SES average for a number of districts

in the small district category, as well as the all district category. These data also strengthened the probability of transferability of study findings and conclusions to a wider audience of Missouri K-12 public school districts.

Student Achievement. To this point in the selection of study site participants, Lakeside R-I was for all intensive purposes, an average district in terms of total average student enrollment and SES percentage when compared to all other 341 small K-12 Missouri public school districts. As previously outlined, even given the variance in the data sets average total student enrollment and SES percentage, Lakeside R-I was near enough to the mean in a normal distribution that it was representative of a number of small K-12 Missouri public schools, even if the distribution were skewed negatively or positively. Consequently, it was student achievement that clearly separated the proverbial wheat from the chaff in the site selection process.

Recall the process outlined in the site selection section of Chapter 3. The student achievement section detailed how each district would be assigned for the years 2001 through 2005, a single value for (a) each grade level MAP achievement test, (b) each content area of mathematics and communication arts, and (c) each district's overall student achievement (see Table A5). It was an analysis of each of these variables that identified Lakeside R-I as a top candidate for site selection.

Having gone through the entire process of determining the student achievement level for each of the 331 small K-12 Missouri public school district, I developed a table listing each district in rank order of its overall student achievement, calculated as previously described. Each district was assigned a value

of 1 to 341, with 1 assigned to the district that had the highest overall student achievement and 341 assigned to the district with the lowest overall student achievement. Lakeside R-I was ranked 15th out of the 331 small K-12 Missouri public school districts. Table J1 and J2 details the student achievement rank in all grade levels and content areas for the top 25 small K-12 Missouri public school districts. Each district was assigned a letter A to X rather than a number as their order will change based upon the remaining variables.

District Expenditures. While researchers are mixed on the relationships between school funding and student achievement (Biddle & Berliner, 2002; Lockwood & McLean, 1993), the use of the expenditures variable was to aid in the site selection process with the selection of a district that had high student achievement, a high SES percentage, and a lower than average expenditure per student. The final criterion used in selecting site participants was current expenditures per average daily attendance. This was previously defined as a single dollar amount calculated for each school district on an annual bases, based upon averaged daily student attendance (ADA) divided by total annual expenditures. A single value was calculated for each district by averaging the five annual current expenditures per ADA.

I sorted the top 25 achieving K-12 small Missouri public school districts by current expenditures per ADA. I ranked each of the top 25 achieving small districts from 1 to 25 with 1 assigned to that district with the lowest current expenditures per ADA and 25 assigned to that district with the highest current expenditures per ADA (see Table J3). Lakeside R-I had an average current expenditures per ADA of

\$5472 and ranked second in current expenditures per ADA with the second lowest total expenditures among the top 25 achieving K-12 small Missouri public school districts.

Summary of Lakeside R-I Quantitative Site Selection Variables

Lakeside R-I was selected as the best representative of small K-12 Missouri public school districts for the purpose of this study after a careful analysis of five variables (a) total student enrollment; (b) total percentage of students on free and reduced lunch, also known as social economic status (SES); (c) total percentage of students scoring advanced or proficient on state assessment tests in communication arts grades 3, 7, and 11; (d) total percentage of students scoring advanced or proficient on state assessment tests in mathematics grades 4, 8, and 10; and (e) total district expenditures per average daily attendance (ADA) are also presented. The analysis of these five variables for each of the 331 small K-12 Missouri public school districts concluded with Lakeside R-I representing the best combination for further study of the Lakeside R-I professional development model to determine which component of said model most contributed to student success. The findings upon which Lakeside R-I was selected are summarized as follows:

- mean Lakeside R-I student enrollment of 770 was well within one standard deviation of the mean enrollment of 669 students for the category of small school districts and nearly equaled the median enrollment of 740 for all districts, thereby strengthening the transferability of the study products to a larger number of Missouri districts.

- the Lakeside R-I SES percentage of 42% was well within one standard deviation of the mean SES percentage of 47% for the category of small school districts and the mean SES percentage of 44% for all districts, further strengthening the probability of transferability of study findings and conclusions to a wider audience of Missouri K-12 public school districts.
- Lakeside R-I was ranked 15th out of the 331 small K-12 Missouri public school districts in student achievement, as measured by the annual state MAP achievement tests over all grades, all subject areas, and for all years 2001 through 2005.
- Lakeside R-I had an average expenditures per ADA of \$5472 and ranked second in expenditures per ADA with the second lowest total expenditures among the top 25 achieving K-12 small Missouri public school districts.

The final stage of the quantitative data collection process was the administration of an online professional development survey. The analysis and findings from the administration of the survey instrument are described in the next section.

Professional Development Survey

I was granted permission by the National Staff Development Council (see Appendix D) to administer their copyrighted professional development survey developed by Lowden (2005) (see Appendix E). I used the ASP SurveyMonkey (2006) survey software to administer an online electronic version of the survey. The survey instrument, as described by Lowden (2005), was divided into two sections.

Section one of the survey collected descriptive data about school variables such as the professional development process, format, and content. Section two of the instrument contained questions that determined the teachers' perceptions regarding (a) participant satisfaction; (b) participant learning; (c) organizational support and change; (d) change in teacher knowledge, skills, and instructional pedagogy; (e) teacher perception of student learning; and (f) changes in attitudes and beliefs of teachers, based on the literature of the five critical levels of evaluating professional development and Guskey's *Model of Teacher Change* (Guskey, 2000). The following sections describe the analysis and findings from each section of the survey.

Response Rate and Participant Demographics. All certified teachers in Lakeside R-I were invited to participate in an online professional development survey that was used to ascertain the thoughts and perceptions of respondents pertaining to the professional development model of Lakeside R-I. District administration identified 55 certified teachers that were invited to participate in the online survey. Participants were sent an initial invitation (see Appendix C) via email. Participants were initially given 14 days or two weeks to complete the survey. Unfortunately, inclement weather conditions throughout the state resulted in power outages and school closures during the initial time period given to participants to complete the survey. This situation precipitated an extension of the opportunity to participate in the online professional survey by an additional 11 days.

Lakeside R-I certified teachers were sent two additional email reminders after the initial survey participation invitation. Each reminder was sent only to those respondents that had not previously completed the online survey. This capability was available to me via the ASP surveymonkey.com. Forty-three certified teachers completed the online professional development survey for a participation rate of 78%. Demographic data are presented in table format based upon participant years of total teaching experience, total years in-district experience, and grade levels taught. Demographic data reported by survey respondents is presented in Table J4.

Professional Development Process, Format, and Content. Bear in mind this study had as a purpose to delineate a professional development process model, when broken down to its smallest parts, elucidates that component of said model that most accounted for implementation of effective instructional practice which enhances student achievement. One aspect of an effective professional development process was a plan linked to student achievement and teacher accountability. Based upon teacher responses to this section of the survey, Lakeside R-I teachers were clearly aware of their professional development plan and its link to student achievement. However, nearly half of the teachers did not make the connection between the professional development plan and any kind of personal accountability for achieving the professional development plan goals. Table J5 details Lakeside R-I teacher responses to this aspect of the Lakeside R-I professional development process.

Another aspect of an effective professional development process was related

to the design of professional development experiences. Lakeside R-I teachers appeared to engage in professional development activities most often during the school year on pre-planned calendar days. Additionally, nearly 75% of the teachers responded that they were involved in professional development activities during the school day. Pfeiffer & Sutton (1999) indicated the imperative of learning by doing often referred to in the professional development literature as job embedded professional development (Sparks, 2002; Hassel, 1999; Ganser, 2000; Galloway, n.d.; Miller, 1999). Table J6 details Lakeside R-I teacher responses for this aspect of the Lakeside R-I professional development process.

Lakeside R-I teachers were asked to respond to the type of professional development they participated in, herein referred to as the format of professional development. Researchers indicated that common themes related to effective professional development format were the issues of teacher learning and time to provide teachers with continuing opportunities to study, reflect upon, and apply the research on teaching and learning (Cook & Fine, 1997). Additionally, effective professional development was no longer considered a learning experience delivered on a particular day, rather continued teacher learning through such formats as action research, study groups, reflection, and teaming were to be intertwined with the educators' school day (Cook & Fine, 1997; Fine & Raack, 1994). These effective professional development formats were among the least participated in by Lakeside R-I teachers (see Table J7).

Section one of the professional development survey concluded with an analysis of Lakeside R-I professional development content. Lakeside R-I teachers

were first asked who decides the content of professional development. Fifty-six percent of the teachers responded that it was the professional development committee in addition to the 34% who responded it was a combination of district staff including administrators and teachers. Desimone and associates (2002) indicated that teacher involvement in planning activities, was one of the keys to the implementation of effective professional development. The final question in section one of the survey asked teachers to list the topics of the last three professional development opportunities offered by the school district in which the teacher participated (see Table J8).

Teachers indicated 10 different types of activities they generally engaged in for their professional learning. However, of the 10 broad categories of learning teachers engaged in, four of these activities were the focus of learning (a) curriculum work, (b) instructional practice, (c) school law, and (d) technology. This indicated that teachers have by and large narrowed their professional learning focus. Teacher responses indicated an emphasis on the integration of technology into the teaching and learning process. Teachers also indicated the priority of their work to align teaching and learning with the Missouri grade level expectations, the standards outlined by the state of Missouri for what students should know and be able to do. An additional activity teachers indicated they were often involved in included expanding their knowledge on effective instructional practice.

Researchers indicate that these activities should be among the content of effective professional development. Corcoran (1995) noted examples of professional development activities which include deepening of content knowledge, learning new

methods of teaching, working with colleagues, critically examining teaching, and learning standards, as well as the development, mastery, and reflection on new approaches to working with children. In addition to these professional development activities, the National Staff Development Council (2006) also listed a variety of teacher activities including visiting model schools, participating in a school improvement committee, writing curriculum, and keeping a journal about teaching practices.

This concludes the analysis and findings from section one of the professional development survey. Section two of the instrument contained questions that determined the teachers' perceptions regarding (a) participant satisfaction; (b) participant learning; (c) organizational support and change; (d) change in teacher knowledge, skills, and instructional pedagogy; (e) teacher perception of student learning; and (f) changes in attitudes and beliefs of teachers, based on the literature of the five critical levels of evaluating professional development and Guskey's *Model of Teacher Change* (2000). The following sections describe the analysis and findings from section two of the survey.

Teacher Perceptions of Lakeside R-I Professional Development. Lakeside R-I teachers were asked to respond to a variety of questions to assess their perceptions on each of the six categories in section two of the professional development survey. Teachers were given the opportunity to respond on a five point likert scale. Responses were reported as one of five choices of (a) strongly disagree, (b) disagree, (c) no opinion, (d) agree, and (e) strongly agree. To aid in the interpretation of Lakeside teacher perception data, statistical analysis was performed. I assigned each response a point value for the purpose of a descriptive statistical analysis. Responses were assigned the values of one to five, one indicated a response of strongly disagree and five represented a response of strongly agree with all others values representing their respective response within the range of choices.

The following sections describe teacher response percentages. I chose this method of presentation in writing to a wider audience of readers including classroom teachers who might benefit from the study products. However, for the reader interested in the descriptive statistical analysis of the data see Appendix K.

Six questions were asked of Lakeside R-I teachers to determine their level of satisfaction with professional development (see Table J9). Teachers reported high levels of satisfaction with Lakeside R-I professional development. Approximately 90% of the staff indicated they agreed or strongly agreed on the majority of questions regarding their satisfaction perceptions. However, as to whether or not professional development time was well spent, some teachers indicated concerns.

Teachers were asked four questions regarding their perceptions of their own learning as a result of Lakeside R-I professional development (see Table J10).

Again, teachers responded favorably to the questions. New knowledge and skills was the most highly perceived learning that resulted from Lakeside R-I professional development. Ninety percent of the teachers surveyed responded agreed or strongly agreed on that question. Some teachers; however, did not believe they learned practical instructional strategies or theory behind the practice from Lakeside R-I professional development opportunities.

Guskey (2000) indicated the merit and worth of professional development was in part determined by “knowledge and skills gained by participants and organizational characteristics and attributes that support professional development and change” (Critical Levels of Professional Development Evaluation section). Regarding organizational support for professional development and changes, teachers had the opportunity to respond to 11 questions regarding their perceptions of organizational support for Lakeside R-I professional development (see Table J11). Teachers perceived varying levels of support from the various stakeholders. Lakeside R-I teachers indicated strong support from the superintendent and building principals. Conversely, the majority of teachers responded that they had no opinion as to the level of parent support for professional development. It also appeared some teachers were uncertain as the availability of in-service credit or stipends. Most teachers believed that professional development positively impacted the district and was most often conducted during the school day.

Teachers responded to the knowledge and skills gained from participating in Lakeside R-I professional development by answering five question (see Table J12). Nearly half of the teachers did not experience long-lasting change or commitment to

new teaching strategies as a result of Lakeside professional development. This was in spite efforts to try new strategies learned as a result of Lakeside R-I professional development. Researchers pointed to the imperative of learning new skills to improve the teaching and learning needed to address the needs of a changing student population. Corcoran (1995) called educators to “master new skills and responsibilities and to change their practice” (p. 1), as a result of the many reform initiatives to improve student learning. Compounding the need to learn new skills was the quickened pace of change in the diversity of the student population educators serve (Haycock & Robinson, 2001).

Not all teachers perceived that Lakeside R-I professional development directly impacted students (see Table J13). Teachers were given eight different questions regarding the impact of Lakeside R-I professional development on students. Elmore (2002) contended that given the imperative to positively impact student achievement, effective professional development “should be evaluated continuously and primarily on the basis of the effect it has on student achievement” (p. 8). While 80% of the teachers agreed or strongly agreed that Lakeside R-I professional development had a positive impact on student achievement, 37.5% of the teachers had no opinion as to whether professional development increased student achievement.

The final series of survey questions ascertained teacher perceptions on their attitudes and beliefs about teaching and learning as a result of professional development (see Table J14). Teachers indicated that effective professional development changed their attitudes and beliefs about teaching and learning.

Ninety-five percent of the teachers surveyed agreed or strongly agreed that their attitudes and beliefs changes when professional development was personally meaningful and they learned practical instructional strategies. The percentages of teachers who agreed or strongly agreed waned a bit when asked about impact on student behavior, performance evaluations, and questions related to teacher recognition. In all three instances, the percentage of teachers with no opinion was higher than other responses to questions in this construct.

Summary of Professional Development Survey Findings

A copyrighted professional development survey developed by Lowden (2005) (see Appendix E) was used with the permission the National Staff Development Council (see Appendix D) to ascertain Lakeside teachers' perceptions of Lakeside R-1 professional development. I used the ASP SurveyMonkey (2006) survey software to administer an online electronic version of the survey.

The survey collected descriptive data about school variables such as the professional development process, format, and content. The instrument also had questions that determined the teachers' perceptions regarding (a) participant satisfaction; (b) participant learning; (c) organizational support and change; (d) change in teacher knowledge, skills, and instructional pedagogy; (e) teacher perception of student learning; and (f) changes in attitudes and beliefs of teachers.

All certified teachers in Lakeside R-I were invited to participate in an online professional development survey. District administration identified 55 certified teachers that were invited to participate in the online survey. Participants were sent an initial invitation via email (see Appendix C). Lakeside R-I certified teachers

were sent two additional email reminders after the initial survey participation invitation. Forty-three certified teachers completed the online professional development survey for a participation rate of 78%. The findings from the online professional development survey of Lakeside R-I teachers are summarized as follows:

- Lakeside R-I had a veteran teaching staff (75% over 14 years teaching experience) with journeyman in district experience (54% with in district experience between 3 and 14 years).
- the preponderance of Lakeside R-I professional development occurred during the school year, and most often during the school day.
- the more effective professional development formats (i.e. inquiry/action research, peer study groups, mentoring, reflection) were among the least participated in by Lakeside R-I teachers.
- the greater part of the teachers were actively involved in the planning of their own professional development.
- nearly every teacher reported high levels of satisfaction with Lakeside R-I professional development.
- teachers indicated new knowledge and skills was the most apparent learning that resulted from Lakeside R-I professional development.
- nearly all teachers indicated strong support of professional development from the superintendent and building principals.

- most teachers reported trying new strategies; however, nearly half of the teachers did not experience long-lasting change or commitment to new teaching from Lakeside R-I professional development.
- almost half of the teachers were not certain professional development impacted student achievement.
- teacher attitudes and beliefs were most effected when professional development was personally meaningful or when teachers learned practical instructional strategies.

Chapter 4 of the study has been broken into three sections; this concludes section two of the chapter. The final section of the chapter presents the data analysis and findings gleaned from the qualitative data collection phase in the sequential explanatory design. Three methods of data collection were utilized to obtain information about teachers' perceptions of Lakeside R-I professional development during this phase of data collection. The three methods used included focus group interviews, personal interviews, and documents review. The following section presents the data analysis and findings from the qualitative data collected in Lakeside R-I. The conclusions that emerged from the data analysis and findings are presented in Chapter 6.

Teacher Perceptions from Focus Group Interviews, Personal Interviews, and Documents Review

Qualitative data analyzed for Lakeside R-I were obtained from focus group interviews and personal interviews with the certified teaching staff. The documents reviewed included (a) their most recent Missouri School Improvement Program (MSIP) advanced questionnaire, (b) school data and statistics downloadable from the Missouri Department of Elementary and Secondary School (DESE) web site (2007c), (c) the Lakeside R-I professional development committee teacher surveys, (d) past professional development activity agendas, and (e) a sample of professional development activities evaluations.

I conducted two focus group interviews, the first with six members of the K-6 elementary teaching staff, and the second with six members of the 7-12 secondary teaching staff. Building principals, the professional development committee chairperson, and the superintendent were asked to recommend certified teacher focus group participants based upon a combination of purposive sampling techniques: nonproportional quota sampling and expert sampling.

The use of the nonproportional quota sampling technique was to approximate the characteristics of the population of all Lakeside R-I certified teachers (2006b). The use of the expert sampling technique was to provide a focus group representing a sample of persons with known or demonstrated experience and expertise in the Lakeside R-I professional development model (2006b). By combining these two sampling techniques in the selection of certified teacher participants, I was able to

facilitate the development of consensus models of the Lakeside R-I professional development.

Focus groups came to consensus on a graphical representation of the professional development model. The model was developed through a facilitated process with each focus group independently. I asked each focus group to (a) brainstorm and list the various components of their professional development model, (b) categorize components into categories or big ideas that represent the processes of their professional development model, (c) give a name to each category or process, and (d) organize each category or process into a model that represented the flow of Lakeside R-I professional development. Each focus group developed their own model of Lakeside R-I professional development (see Appendix L & M). Focus group participants were then asked to comment on their model and Lakeside R-I professional development in general (see Appendix F). Focus group data were analyzed collectively with the data from personal interviews and documents review.

I conducted personal interviews with four Lakeside R-I certified teachers, two elementary and two secondary. Teachers were purposively selected based upon their knowledge of Lakeside's professional development program. The selection of personal interview participants was based upon the recommendations of focus group participants and the administrative staff. Interview data were analyzed using the constant comparative method (Lincoln & Guba, 1985) and was facilitated by the use of the Microsoft Office suite.

Data from focus group interviews, personal interviews of Lakeside R-I certified teachers, and documents reviewed were analyzed and sorted into

categories and themes. Nine categories were identified: (a) structure, (b) curriculum alignment, (c) collaboration, (d) commitment, (e) conferences, (f) technology, (g) leadership, (h) accountability, and (i) evaluation. Within some of the categories several themes emerged. The remainder of this chapter is organized around each of the categories and the themes within the categories.

Results of Qualitative Data Analysis

The general structure of Lakeside R-I professional development was based upon the guidelines and recommendations of DESE. The Missouri Department of Elementary and Secondary Education (2007a) provided for Missouri public school districts, online access to guidelines for professional development that were recommended or required based upon the Missouri Outstanding Schools Act of 1993. I found and observed that the general structure of Lakeside R-I professional development was based upon these DESE guidelines.

Lakeside R-I's professional development was basically organized and directed by their professional development committee (PDC) in consultation with district administrators. A teacher reported "The professional development committees met with the administrators to see what things the administrators would like to have their faculty work on..." DESE guidelines indicated "Professional Development Committee (PDC) work must be done in consultation with district administration" (Missouri Department of Elementary and Secondary Education, 2007a) (p. 6).

DESE (2007a) guidelines also indicated that PDC "members can be chosen by the faculty as a whole, nominated and elected by colleagues within specific levels and/or disciplines, or selected by teachers, [and] the term of Professional

Development Committee (PDC) membership is not specified in the law” (p. 28). As a teacher indicated, “We try to have a representative from the elementary, the middle school, and the high school...we also try to have a person from special services, if we can get a special services person representative of each grade level.” Lakeside R-I PDC members generally served three year terms and were elected by their respective faculties. This was verified by a teacher who stated, “We have a three-year commitment to the professional development committee.”

Additionally, the Missouri statutes established for all public school districts that, “a school district shall allocate one percent of monies received...to the Professional Development Committee (PDC) of the district” (Missouri Department of Elementary and Secondary Education, 2007a, p. 7). District funding of the PDC was affirmed by a teacher who stated “we do have lots of money to use for professional development...” Other teachers; however, were concerned about the access of funds by all teachers. A conversation among focus group participants about funding led one teacher to ask another how many teachers had historically used their allotted professional development funding. Another teacher responded, “It’s low, the percentage is low on the people that use the money.” However, the same teacher that responded to the original question indicated that more recent numbers of participation were up and indicated that several teachers had planned to access their allotment of professional development funds for activities scheduled later in the school year.

Related to professional development funds available to individual teachers, another teacher stated, “We are given an amount of money that we can use for

professional development. We can use the money to attend a conference, pay registration fees, or pay for a substitute teacher.” I reviewed a Lakeside R-I professional development survey document that indicated “Each faculty member will be allotted up to \$300...for professional development.” Subsequent conversations with Lakeside R-I leadership indicated this amount was increased to \$400. DESE (2007a) guidelines for professional development did indicate that money “must be used for professional development that enhances student learning as a result of all teachers having the opportunity to grow professionally” (p. 54).

The general structure of the Lakeside R-I professional development calendar, until recently, involved two or three days prior to the start of school. The DESE (2007a) guidelines stated “Normally, the time planned for professional development is during designated professional development days, before school, after school, on Saturdays, and during the summer” (p. 54). Teachers indicated a recent addition of four half-days for professional development. Lakeside R-I teachers perceived the addition of the half-days to be a significant change in their professional development structure. This was shared best by a teacher who stated, “I think our professional development has evolved from the first time we started it. It was quite an accomplishment for us to be able to get a half-day approved from the Board.” The guidelines pointed out the need for time during the school day or work time (Missouri Department of Elementary and Secondary Education, 2007a). Another teacher indicated the structure of the current professional development calendar. The teacher commented, “I believe we have four built in half days...plus we have the typical two or three, I believe it is, before school starts.” Another teacher

confirmed the addition of professional development days when the teacher commented, “as we’ve continued with those [before school starts professional development days] we have gotten a few more early outs.”

How Lakeside R-I teachers used their professional development days in addition to other key aspects of their professional development structure are shared throughout the findings that follow. The reader will recall that Lakeside’s selection as a participant sight was based in part on their high student achievement. Lakeside R-I teachers suggested that student achievement was related to the following finding. A finding related to curriculum alignment follows.

Lakeside R-1 teachers attributed high student achievement to their early curriculum alignment efforts. Loucks-Horsley (2003), in her book on designing professional development, shared since the books first edition in 1998, “new and promising strategies for professional development have emerged and caught our attention, including lesson study, curriculum alignment and instructional materials selection, and demonstration lessons, and are now included in an expanded description of professional learning strategies” (p. 1-2). Professional development strategies associated with curriculum efforts were noted as a contributor to student achievement by teachers in Lakeside R-I. In particular, elementary teachers in their focus group shared a number of insights about their professional development model as it related to curriculum.

The elementary teachers’ focus group developed their graphical representation of the Lakeside R-I professional development process (see Appendix L). Teachers were asked to label each component of their model. In their graphical

model, they specifically named one component of the model *Curriculum*. Responding to a question as to which components of the model most influenced improved student achievement, one teacher commented:

I feel that the way we have reworked our curriculum in the past few years [to] make sure that it is internally aligned and that we are building on things from previous grades...rather than repeating the same information over and over again...building on their [students] skill level...I think that [curriculum alignment efforts] has helped their [students] achievement level.

Other members of the focus group appeared to agree with this statement as exemplified by the observation of several affirmative nodding heads. Commenting on the same questions, another teacher stated, “We have placed a lot of attention on core academics, improving our curriculum, what we’re teaching.” In addition to the elementary teacher focus group participants, other teachers during their personal interviews shared similar thoughts.

I asked individual teachers, during their personal interviews, what they believed teachers did, either regularly or occasionally, to improve student achievement. One teacher said, “I think that the main things we focus on, and also the main thing in the last few years, is just rewriting the curriculum so we are all heading in the same direction.” Another teacher responded to the same question and pointed out the importance of their efforts to align Lakeside R-I curriculum to the state standards, herein referred to as the grade level expectations (GLEs). This teacher responded, “We look at the grade level expectations as to what each student is responsible for knowing at each grade level, and we have in the past two years

rewritten our curriculum so it aligns with the GLEs.” Research indicates the value of Lakeside R-Is curriculum alignment efforts. In her summary of effective school practices, Cotton (1995) indicated one such practice was “collaborative curriculum planning and decision making, focusing on building continuity across grade levels and courses; teachers know where they fit in the curriculum” (2.1.2 section).

Other pertinent findings from the literature related to work on curriculum also indicated the value to curriculum writing and alignment efforts as effective professional development strategies. In her eighteen strategies for professional learning, Loucks-Horsley (2003) indicated aligning and implementing curriculum, and the selection of instructional materials “as robust examples of professional development” (p. 12). Hiebert and associates (2002) shared the “growing consensus that professional development yields the best results when it is long-term, school-based, and collaborative, actively involving all teachers, focused on students’ learning, and linked to the curriculum”(p. 3). Lakeside R-I teachers responded similarly when asked what professional development processes were at work to encourage increased student achievement.

Responding to the question of professional development processes that encourage increased student achievement, one teacher stated, “I believe the focus this year has been on curriculum, revamping, rewriting curriculum so that it aligned with the state expectations and the GLEs.” Another teacher indicated the same thing including the continuum of the curriculum work with the following statement. “We finalized some of the revision to the curriculum which we started

last year.” Teachers also expressed concerns with the time it took to work on the curriculum.

Teachers shared their concerns about the time it took to rewrite curriculum. Comments that expressed this sentiment were typical of one teacher who shared, “curriculum writing takes a lot of time and if you’re having to write curriculum and prepare fully for your class or classes, it is a huge load” Another teacher shared a similar response that indicated, “Last year we worked on curriculum, that obviously was not enough time, but it’s at least a starting point.” Researchers concurred on the issue of lacking time for quality professional development. Cook and Fine (1997) shared the same thought when they commented “a fundamental lesson learned in the past decade of school reform efforts is that far more time is required for professional development” (Overview section, ¶ 3).

This section developed the finding on Lakeside R-I curriculum alignment efforts to improve student achievement. Teachers suggested their collective curriculum revision process was a key contributor to increased student achievement. Teachers appeared to suggest curriculum efforts were completed collaboratively. The potential for this type of activity lies in the following section that outlines a finding related to teacher collaboration.

Lakeside R-I teachers perceived that collaboration among teachers throughout the district contributed significantly to meeting the learning needs of students and teachers. Kelleher (2003) supported this postulation when he suggested that given the current research on effective professional development, peer collaboration “should be given the most importance, since it is job-embedded and thus should

have a bigger impact on student achievement” (p. 754). Lakeside R-I teachers shared a number of statements related to their collaborative efforts to improve student achievement. Lakeside R-I teachers consistently indicated their efforts to improve student achievement were in large part, based upon collaboration; however, within the context of student improvement, Lakeside R-I collaboration typically centered around three themes of (a) planning, (b), assistance, and (c) vertical teaming.

Opportunities to plan together were mentioned several times by Lakeside R-I teachers as a rationale for their collaboration. When asked to comment on things done regularly or occasionally to improve student achievement, one teacher stated, “I know the [elementary] grade levels meet once a week to plan. We plan together.” Another teacher commented, “My department meets to discuss goals and how to meet those goals.” Asked what professional development process at Lakeside R-I encouraged increased student achievement, one teacher responded, “We have a shared plan time during fifth or sixth hour. About every day we have a chance to sit down with four core teachers and discuss any problems.”

Assisting their fellow teacher was also cited as the impetus for collaboration. A teacher comment that appeared to summarize the general perceptions of most teachers, when the teacher was asked what things were done to improve student achievement, the teacher said, “We feel very comfortable in talking to each other and saying ‘I’m having trouble here, can you give me some help?’” Responding to the same question, another teacher shared a similar reaction and stated, “I know that our grade level teachers are beginning to use the multimedia projectors . . . if they

are having trouble getting it [the projector] to work, they stop me on a break and ask ‘Can you help me?’ and I say, ‘Yeah, I’ll help you.’” Lakeside R-I teachers provided the same assistance to new teachers, typically an in-district transfer from another grade. This was summarized in one teacher’s comment, “We haven’t had a lot of turnover, but we have had new people from different grade levels, and we really try to check in with them. ‘How are you doing? How did this go? Is there something I can help you with?’” Each of these responses was in the context of a question about their perceptions on what they do to improve student achievement.

A teacher in the personal interview and some teachers among the focus group participants commented on collaborative efforts related to the theme of vertical teaming. One teacher shared a desire to see more collaboration among the three divisions of the district; elementary, middle school, and secondary. The teacher shared, “The elementary doesn’t always get to see what the high school is doing. The high school doesn’t always see what middle school is doing. I think we could learn more there.” Focus group participants indicated the importance of student improvement through more collaboration among vertical teaming.

Asked which component of the elementary professional development model (see Appendix L) most influenced student achievement, one teacher responded, “It is very important that we know what the grade below us and the grade above; what’s going on there...its communication. Its got to be.” Another teacher responded to the previous comment:

I would say I agree because I know I have something I am doing in my grade level, and if I want to build up for the next grade, I go and ask the next grade

level staff what I can do in my grade level to prepare students for the next grade. I consider what we discussed in meetings and see how I can implement, maybe even in simple steps, like place value and simple things like that.

The elementary professional development model had one component labeled *Meetings* (see Appendix L). Several teachers in the focus group indicated this component most influenced improved student achievement. One statement was, “I think it comes from our meetings I think it starts with our meeting.” Another teacher related the purpose of the *Meeting* component to the rationale for the choice of the *Meeting* component having most impacted student achievement. This teacher said, “In our meetings we typically discuss student performance.” In his analysis of 13 lists from researchers and research organizations who have identified their characteristics of effective professional development, Guskey (2003a) suggested, “For collaboration to bring its intended benefits it, too, needs to be structured and purposeful, with efforts guided by clear goals for improving student learning” (p. 11).

While teacher collaboration was important to all focus group participants, not all teachers believed the *Meetings* component of the professional development model most influenced student achievement. One teacher summarized the importance of collaboration among staff members; however, this teacher also believed collaboration was part of every component on their professional development model. As to the question about which component of the model most influenced student achievement, this teacher answered, “We’ve taken all of those [pointing to the

components on the professional development model] and tried to do something within the school district and within our areas to improve, so I think I could take all of them [again, pointing to all components of the professional development model].

Other researchers also indicated the importance of teacher collaboration. Corcoran (1995) spoke to the need for teachers “to deepen their content knowledge and learn new methods of teaching [teachers] need more time to work with colleagues, to critically examine the new standards being proposed, and to revise curriculum” (§ 1 & 2). In their analysis of a national study of effective schools programs that were case studies of 5 states, 16 school districts, and 32 schools conducted by SRI International, Quellmalz and associates (1995) indicated, “the most successful schools developed and sustained a culture in which teachers worked collaboratively and actively participated in decisions that directly affected their ability to improve classroom practices (Analysis and Highlights section).

This section has described Lakeview R-I teacher perceptions of collaboration as a part of their professional development efforts to improve student achievement. The following section emphasizes the commitment of Lakeside R-I teachers.

Lakeside R-I teachers articulated a strong commitment to personal improvement, continued achievement, and students. Research in the area of teacher commitment was not part of my initial literature review; however, the finding of commitment in the data analysis of Lakeview R-I teacher perceptions followed with a search of the commitment literature base. Of particular pertinence to this study were the findings of (Coladarci, 1992). The context of the Lakeside R-I setting was particularly germane to the findings of Coladarci (1992) as related in his statement:

General and personal efficacy emerged as the two strongest predictors of teaching commitment, along with teacher-student ratio, school climate, and sex. In short, greater teaching commitment tended to be expressed by those teachers who were higher in both general and personal efficacy; who taught in schools with fewer students per teacher; and who worked under a principal regarded positively in the areas of instructional leadership, school advocacy, decision making, and relations with students and staff. Teaching commitment also was higher for female teachers (p. 323).

Lakeside R-I teachers generally shared their commitment in terms of three themes: (a) improvement, (b) high achievement, and (c) students. Teacher's commitment to improvement was most often mentioned. Teachers referred to their commitment to improvement as one aspect of what they believed to be effective professional development.

Commenting on commitment to improvement, in response to the question of effective professional development, one teacher stated, "The teacher has to have the right mindset. They have to be constantly looking for other ways and other

strategies to improve upon themselves. I mean, without that attitude it gets pretty stagnate and repetitious year after year.” In a similar vein, another teacher shared, “People have to care you have to have a genuine interest and want to improve it.” Lakeside R-I teachers also commented that self improvement was related to student improvement. This was shared by one teacher who said, “We are constantly looking for ways to better ourselves and bettering our students.”

Teacher commitment was also evident when they were asked to identify why student achievement was high in Lakeview R-I. This was evidenced when a teacher commented “I believe we have a lot of good teachers here who are willing to improve themselves.” Another teacher shared a similar comment about the teaching staff’s commitment to improve, “I think we [Lakeside R-I teachers] have a lot of the skills that we need. I think we are very open to listening to what else is out there.” The importance of this commitment to improvement was highlighted in the U.S. Department of Education’s (1998) 1999 strategic plan outlining long-term goals and objectives. One goal in particular indicated, “A talented, dedicated, and well-prepared teaching force is one of the most important ingredients for successful educational reform. Teachers' knowledge and skill make a crucial difference in what students learn” (Objective 1.4 section).

As part of their commitment to improvement and as a rationale for continued high student achievement in the future, one teacher suggested the importance of reflection and self evaluation based upon student performance. This teacher indicated an initiative they had planned to implement and shared the same in the statement, “One of the things we’re going to do is start a process for teachers

critically evaluating themselves. [We have created forms] they are going to fill in with the statistics on their class's student achievement."

Another theme identified was Lakeside R-I teacher commitment to high achievement. When asked to respond to the Lakeside R-I trend in student achievement, teacher commitment to high achievement was evident when the teacher said, "As much as I'd like to say it's professional development, I'd have to say we really have a group of teachers dedicated to the kids. They want the kids to perform well. They want our scores to show off our pride in [Lakeside R-I]." A similar comment from another teacher was, "In terms of the increase in student achievement, it would be the fact that the teachers are going to focus on increasing student achievement and try their best." Again, commenting on a rationale for the trend in Lakeside R-I achievement, another teacher stated, "The most contributing factor is teachers, who really reach kids, work towards scores in a variety of ways from the day they walk into the classroom."

The final theme was a commitment to students. The reader may conclude this theme was closely related to Lakeside R-I teacher commitment to high achievement or that a commitment to high achievement was more about students. I separated the two based upon the context of teacher comments that focused more on test scores and achievement (i.e. commitment to high achievement) and teacher comments that were specific to students (i.e. commitment to students).

Teacher commitment to students was most evidenced in the teacher who said:

I think there is a high degree of commitment for a lot of teachers in this school to work with students before and after school. We are not necessarily just devoted to the school day. We have one [subject area] teacher who gets here every morning at 7:15 a.m. and it is not unusual to walk by [his or her] classroom and see it half filled with students. They're here to get that extra help because they know that they need more of [his or her] attention.

Another teacher in a focus group summarized commitment to students best in the comment, "I think with everybody in here we could say that the kids are first." All other teachers in the focus group nodded and smiled in confirmation.

Based upon a review of research on school effects and workplace psychology, Reyes (1992) outlined four conditions that enhanced organizational commitment. He indicated that collaborative effort was "the most powerful condition that must be present at school to enhance teacher organizational commitment" (p. 13). Additionally, Reyes (1992) offered "a strong argument for enhancing administrative support for teachers at the workplace as a condition to increase teacher commitment to school" (p. 13). His third condition indicated an "Orderly school environment was found to be another organizational condition facilitating teacher organizational commitment" (p. 14). Last, he suggested "the more teachers are allowed to experiment and innovate in the classroom the more they develop commitment to the school. (p. 14). I found in some degree each of these conditions at Lakeside R-I. What follows is the finding related to Lakeside R-I teacher use of conferences as a form of professional development.

Lakeside R-I teachers considered conferences to be an important aspect to their continued professional growth. Researchers indicate several problems related to the use of conferences or workshops as a means of professional development. Kellehner (2003) discussed the traditional nature of professional development that consisted of activities such as “attending conferences.” He continued with an outline of three problems associated with this type of activity: (a) “they tend not to help teachers translate new learning into classroom instruction;” (b) “often not necessarily tied to specific building and district goals for student learning;” and (c) “there is usually no assessment mechanism to measure the results of professional development activities” (p. 753). In response to my questions, Lakeside R-I teachers detailed: (a) the types of conferences they attend, (b) their various reasons for going to conferences, and (c) the general structure of the approval process to attend a conference as part of their professional development activities.

One in particular conference several teachers mentioned was often referenced in terms of the “league” or “conference.” Based upon follow-up questions and teacher responses, I implied that this meant the academic and athletic league or conference of which Lakeside R-I was a member. A teacher explained his conference in the following terms:

All the schools in the conference have a day without kids and we meet together and, they have a speaker come in. Altogether there are eight schools; last year I went as a representative from Lakeside R-I to see how it went.

In one of the focus groups, another teacher explained the league event. In answer to a question about Lakeside R-I professional development process that improved

student achievement, the teacher stated, “We also have a full day staff development with a conference meeting where we draw speakers from different schools; there are speakers from MSTA [Missouri School Teachers Association], STARR [Select Teachers as Regional Resources] teachers, administrators present things; teachers present different things. We also have best practices.” Other teachers spoke of a state conference in a particular content area such as physical education. Additionally, one teacher mentioned the national reading conferences in “Kansas City or St Louis due to their central location.”

Teachers spoke at length about their rationale for attending the various conferences as part of their professional development plan. One teacher indicated, “I have always, through the years, gone to any conference that I possibly could that would pertain to the classroom, and help me become a better teacher in whatever area.” When asked about the things they do to improve student achievement, a teacher indicated that “quite a number of us are always looking for ways to increase or improve student achievement. So, therefore, any conference we can go to anything we can get our hands on any reading we can do; we participate.” New teachers as well, are encouraged to go to conferences. One of the teachers in a focus group shared, “We try to really get our new teachers involved in going to conferences; going out there seeing what else there is.”

Content area focus was stated as a reason to attend a conference. Asked about support from outside the district that impacts student achievement, one teacher commented, “I know there is a conference that I attend every year that’s a

[content area] conference that I always gain ideas from and I'm always looking forward to going for me personally, going and getting new ideas is important.

The secondary consensus professional development model had a component labeled "*Outside Conferences*" (see Appendix M). Asked which component of the professional development model most influenced student achievement, one teacher, in building on another's comment, stated that "another component would be outside conferences because when you go to the conference it is based upon your subject area. It's kind of like the best practices. You're listening to ideas and speakers that have proven things in their classroom." In response to the teacher, another teacher commented:

And you are able to choose something that you know you need assistance in an area rather than a speaker that has been chosen from a survey of the staff. Not that that isn't helpful also, but with the outside conferences you are choosing something that you know you need help with in your classroom.

This sentiment was repeated during the focus group interview by another teacher. Asked about support from outside the district that impacts student achievement, one teacher said, "In my opinion, the biggest thing that's going to impact student achievement would be the meetings or conferences you go to or speakers that come in and provide you with information, new strategies, new ways to present information."

A teacher pointed out the primary criteria associated with the approval process to attend a conference. The teacher stated, "As long as you have met one of the student outcome needs, your conference is cleared." A teacher also indicated an

opportunity to improve the process of conference approval and the resulting value of conferences. This teacher said, “maybe there are conferences when you come back [from] and share with other teachers informally; maybe if we did [share] more formal like we used to; to get those ideas out.”

The research literature on the use of conferences and workshops indicated the poor effectiveness of conferences and workshops when compared to other strategies for teacher professional development. Quellmalz and associates (1995) findings from the results of case studies of 5 states, 16 school districts, and 32 schools indicated that “Staff evaluated professional development needs, resources, and capacity and developed multi-year plans, instead of relying on disconnected, one-shot workshops” (Analysis and Highlights section). Even when the intent of conference or workshop participation was new information, researchers from WestEd (2000) indicated “it’s not enough to be exposed to new ideas, we have to know where they fit, and we have to become skilled in using them” (p. 20). Lakeside R-I teachers; however, are not alone in their use and dependence on conferences and workshops. In their analysis of survey data from 44,933 public school teachers and 9,415 public school principals Scotchmer and associates (2005) found that “Ninety-five percent of public school teachers reported attending a workshop, conference, or other training session in the previous year, compared with 42 percent who reported participating in mentoring, peer observation, or coaching” (p. 1).

While the Lakeside R-I teachers appear to rely heavily on conferences and workshops to meet many of their improvement needs, local improvement efforts were also apparent. In recent years Lakeside R-I was committed to improvements

in their use of technology. The following section describes the local professional development efforts to increase the use of technology to improve teaching and learning.

Lakeside R-I teachers expressed that the district was committed to the increased use of technology to improve instructional practice and student achievement. Commenting on professional development in the use of technology Rodriguez (2000) stated:

Whether technology should be used in schools is no longer the issue in education. Instead, the current emphasis is ensuring that technology is used effectively to create new opportunities for learning and to promote student achievement. Educational technology is not, and never will be, transformative on its own, however. It requires the assistance of educators who integrate technology into the curriculum, align it with student learning goals, and use it for engaged learning projects (Issue section).

Several teachers commented on the increased amount of technology and its use. Responding to a question on Lakeside R-I professional development processes that increase student achievement, one teacher shared, “Starting last year we did a big push on technology, because we were just way behind.” Commenting on what constitutes effective professional development, one teacher stated, “We’ve got quite a bit of new technology equipment. You just need time on that equipment to figure it out.” On the same question, another teacher said, “We are to the point now a large percentage of our classrooms have multimedia projectors in the classroom and Power Point sometimes is an effective tool that you can use, depending on the age

[of the student].” In response to things that they do to increase student achievement, one teacher indicated, “We have computer labs...opportunities for students to do things with technology.”

It was clear the teachers of Lakeside R-I recognized the district commitment to technology. Additionally, teachers indicated the impact of the technology influx on student achievement. A teacher responded to a question on professional development processes that increase student achievement in Lakeside R-I. That teacher stated, “we’ve been focusing on technology quite a bit in terms of professional development, which I think has a big impact on student achievement; number one, the students become more involved when they see things they’re interested in a little bit more.” Another teacher indicated increased student engagement with the introduction of more technology. This teacher commented, “If I put it on the media projector or a white board; [or let students use] the little lapboards; they think they’re playing and are not realizing how much they learn.”

The secondary consensus professional development model had a component specifically labeled “*Technology*” (see Appendix M). Asked which component of their professional development model most influenced student achievement, one teacher said, “I am huge in technology. Since I switched to PowerPoint™; I am able to give visual learners a little more than just the auditory, so I personally think technology.” Another teacher responded to the same question with, “I think technology in the classroom is essential.” The first teacher responded again to this question and shared another insight on behalf of his more experienced teacher colleagues. In summary, this teacher added, “I can safely speak for most of us.

When we were in college it [technology] wasn't even pushed, it wasn't an issue. Today, if you can't work a computer, you're kind of on the outside looking in."

In his description of seven exemplary professional development programs in the northwest Peixotto and Fager (1998) stated, "It is important to note that follow-up training is the key to ensuring success with new methods of technology teaching" (p. 22). Byrom (1998) reminded educators it is important to combine effective teaching strategies with "pedagogically sound technologies that lead to improvements in learning" (5 section). Rodriguez (2000) suggested, "One strategy to motivate teachers to spend the time and energy necessary to develop technology competency is to mandate participation in technology professional development" (Active Participation of Teacher section, ¶ 1).

Lakeside R-I teachers' responses appeared to indicate their enthusiasm for the additional technology and professional development on the use of same. Teachers also mentioned the role of district leaders and their support of these and other professional development opportunities. The next section describes the role of administrative support in the professional development at Lakeside R-I.

Lakeside R-I teachers deemed the focus and support of district leaders a positive contribution to professional development efforts. Teachers were asked how district leadership supports or contributes to professional development that improves student achievement. Lakeside R-I teachers described two types of administrative support important to their professional development efforts. One such theme teachers indicated was specifically related to support in the traditional

sense of encouragement and assistance. Another theme teachers commented on was that of focus as it related to attention to a particular thing, or an area of concern.

Examples of the traditional type of support (i.e. encouragement or assistance) were mentioned by one teacher who stated, “I think our administrators are supportive of anything that would help us and they want our test scores up. They want us to be better teachers and anything they can do to help us, they do.” Another teacher was asked why Lakeside R-I showed high student achievement. This teacher simply said, “I would say a lot of it is the administration’s support.”

The reader will recall the earlier described category of conferences. When asked how leadership supports professional development that improves student achievement, one teacher said, “They encourage you to go to any conference, anything that they see that comes up; they put it in your mailbox and say, ‘Would this be applicable to you; would you like to attend this?’” I included this statement as an example of the type of support administrators provide teachers; however, it could have also been included in the section on conferences.

Another example of administrative support of teachers’ professional development also indicated the ingenuity and flexibility administrators demonstrated. This was evidenced when a teacher, commenting on administrative support, said, “I know in the [grade level configuration, principal name] has tried to have a half day sub that came in for somebody for some reason [principal gender] would still pay them for a full day to free up another teacher for professional development.” Researchers indicated the value of this type of ingenuity and flexibility to overcome the barrier of time to effective professional development

activities. In their study of the winners of the National Awards Program for Model Professional Development, WestEd (2000) noted the need for “rethinking and restructuring time [as] central to building a learning culture” (p. 32).

Teachers also gave examples of administrative support that appeared to focus their professional development efforts. One teacher discussed work with an administrator to “put together things that the administrators see as important and would like the teachers to focus on.” Another example of administrative support that focused professional development activities was explained by a teacher who responded to a question regarding the determination for effectiveness of professional development. This teacher, also a PDC member, said, “The professional development committees met with the administrators to see what things the administrators would like to have their faculty work on and then we’ve tried to incorporate a lot of that.”

When asked how the district leadership contributed to professional development that improved student achievement, one teacher shared, “I think that the administration has a broader spectrum of the district and what I do in my classroom and what they think may help improve student achievement.” Teachers also commented on their collaborative work with administrators. A teacher, who was also a PDC member, shared, “They [administrators] are pretty active, particularly two years ago when there were several things that were going to require a lot of teachers to be involved, and so we drew the administrators in to the professional development committee meetings so that we could brainstorm together.” This teacher also said, “We meet with administration and decide which

topics would be best addressed; how we could address them; what format we needed to use; who needed to be involved.”

One final point of focus that administrative support provided also spoke to accountability. A teacher was answering the question how it was determined if professional development was effective or not. This teacher said, “We have had a couple instances where we’ve had professional development activities and then the administration required us to implement things in our classroom.” In her analysis of research on effective school practices, Cotton (1995) affirmed the need for supportive leadership. One finding from her analysis stated, “administrators and other leaders engage staff in professional development and collegial learning activities” (2.3.4 section). She pointed to the finding that leadership should, “Work to establish a norm of collegiality; communicate the expectation that staff members will routinely share ideas and work together to improve the instructional program” (2.3.4 section).

In this section I indicated the importance of leadership support to Lakeside R-I teachers. Teachers also indicated an occasion when leadership required certain action after a particular professional development activity. This particular point also leads to another finding in the data regarding accountability. The following section describes teachers’ perceptions on accountability.

Lakeside R-I teachers believed that continued improvement was predicated on increasing accountability for self imposed requirements and state mandates. In this finding, teachers primarily discussed accountability in terms of district requirements. One teacher did make a single reference to state mandated testing as

a contributor to the trend in student achievement; however, I did not consider this single reference warranted the addition of another theme. Teachers typically mentioned district requirements related to those that local leadership imposed.

Teachers commented most on district accountability when they responded to the question on what constitutes effective professional development. One teacher stated, “In order to be effective, it has to be followed and practiced by everybody in the district; all the way from school board down to the cooks, janitors, and secretaries. Everybody is directly involved in it.” A similar comment made by another teacher was, “Sometimes you need to be forced to try different things and once you’ve learned those different things, then apply them in the classroom.”

Perhaps the strongest comment on local accountability was when a teacher answered the same question about what constitutes effective professional development. This teacher stated, “One that has teeth in it. We just discussed in the focus group that the most effective professional development that relates to instruction is something that the administration is requiring of you.” In a similar vein another teacher said, “If we just go to meetings; even though that information may be the best in the world; typically, if the administration doesn’t place some sort of requirement on you, it’s just filed away.” One teacher acknowledged the barrier of time related to effective professional development. Even so this teacher shared, “Everybody’s busy. But the amazing thing is if someone says you have to do it; it’s part of your job requirements; then you find the time and it all works out.”

These types of statements were not limited to the security and anonymity of the personal interview. Even in the presence of fellow teachers during the focus

group interview, teachers shared similar sentiments. Teachers in the focus group indicated opportunities for improvement of the professional development model in terms of increased accountability or what they termed “administrative requirement.” In reference to Lakeside R-I efforts to improve technology integration, a teacher shared:

I don't want to; I hate to be the person who says this, but I think if we were required to do more; I think that we have a lot of support through the administration and the school Board, and I think that they have went a little easy on us, especially in areas like technology. Some of our staff does not have much experience in technology and so they [leadership] don't want to overwhelm staff members that might be turned off to technology. I think that also means that we have not stepped up and used it as much as we could, because it hasn't been a requirement.

Another teacher in the same group added, “You knew going into it there was going to be a lot of negativity. I specifically asked our superintendent and principal; put it into the second teacher evaluation a lesson you want to see [using] Power Point.” The issue of district requirements related to professional development was also mentioned in relationship to conference attendance. Another teacher in the focus group said, “if office administrators say, ‘I would like you to teach me,’ or ‘when you come back you are required to have a departmental meeting [to] share ideas that you got.;;’ teachers are going to have a meeting.” Researchers confirmed the value of this type of requirement or accountability. The Center for Comprehensive School Reform and Improvement (2006) commented, “After

attending one of these events, teachers should be encouraged or even expected to share what they have learned with their colleagues at a faculty or team meeting” (Vary the Format section). Additionally, researchers pointed out that accountability is strengthened by strong leadership. In her synthesis of research on effective school practices, Cotton (1995) outlined the importance of strong leadership and indicated that instructional programs improve when leaders “provide well-organized, systematic improvement strategies, give improvement activities high priority and visibility, and monitor implementation of new practices” (2.3.2 section).

This section described Lakeview R-I teacher perceptions on accountability. Teachers predominantly spoke of accountability in terms of district or administrative requirements. Teachers also indicated the opportunity to improve their professional development model with potentially more accountability. Another aspect of improvement that teachers discussed was the evaluation of professional development contained in the next section.

Lakeside R-I teachers believed the evaluation of professional development activities could be improved. In their report summarizing research on professional development for the School Improvement Branch, Basic Learning, Alberta Education, the InPraxis Group (2006) stated, “According to a consistent consensus of expert opinion, any professional development program should be able to answer the ultimate question — ‘Does our professional development have a positive effect on student learning?’” (p. 35). Teachers discussed professional development evaluation in terms of two themes of surveys and student achievement. Surveys were discussed as a method of evaluating teachers’ professional development needs

and a method to quantify teachers' perceptions on the quality of professional development activities. Student achievement was discussed in more general terms usually related to student performance on state assessment tests.

When questioned about determining the effectiveness of professional development activities, one teacher said, "The professional development committee has provided surveys for us to indicate what has been effective and what has not; what teachers would like to see continued and what not be continued." Another teacher responded to the same question. This teacher said, "One thing we do is teachers fill out an evaluation sheet after presentations; first on the speaker; also there's a section about the activity; whether we are going to be able incorporate the new learning into the classroom." Documents reviewed included several evaluation forms. I did confirm the inclusion of these types of questions on the survey documents.

Another aspect of Lakeside R-I professional development evaluation included a needs assessment. Documents reviewed indicated this information is used to determine the value of repeating past activities as well as assessing teacher learning needs that should be addressed with future professional development activities. One teacher in a focus group, when asked how professional development is determined to be effective, also verified the use of surveys to assess the learning needs of teachers. This teachers stated, "Teachers are given the opportunity to make notes on what help they need, what they like, and what they would suggest." Another teacher in the same group commented, "Teachers can tell us their specific needs; what they actually need help with from professional development."

Lakeside R-I teachers generally agreed about the value and use of surveys as a means of determining the effectiveness of professional development. When a discussion regarding student achievement as a means of evaluating the effectiveness of professional development started, teachers struggled with how this might be accomplished. The typical response of teachers related to student performance on state assessments.

Asked what constitutes effective professional development, one teacher responded, “One where a connection is made between teacher improvements as it’s related to student achievement. If that connection is not made, then I don’t consider it effective” Asked how professional development was determined to be effective at Lakeside R-I, another teacher stated, “One way that we evaluate is when the test scores come in.”

Another teacher responded to same question with a question. This teacher asked, “How is it determined whether professional development improved student achievement?” This teacher added, “To say we have a direct correlation between a professional development experience and achievement, I really wouldn’t know how to answer that; that I can tie them together. I am not at all certain that there’s any relation.”

Teachers in the focus group interviews struggled with similar questions related to evaluating the effectiveness of professional development. Given the opportunity to add or make other comments about their professional development that might assist me, one teacher shared, “If we are free to evaluate what we’ve done, then we can start acknowledging the holes in what we’ve done. We need to

address this. What can we do to address this?” Another teacher stated, “When you are bringing in somebody else, or you’re climbing the expert on your staff, you’ve got to do that evaluation.” Perhaps this sentiment was best summarized by another teacher in the focus group commenting on this discussion. This teacher said, “This is something all professional development in all schools should do [evaluation]. I think that is going to improve our professional development so much once we add that [evaluation] part to our model.”

Researchers concur on the importance of professional development evaluation. Commenting on the complexity of evaluating professional development, Noyce and Bouw (2006) indicated, “The standard should be that every professional-development intervention that does not already rest on a robust research base should include a strong, statistically defensible plan whether, because of the intervention, students are learning more” (¶ 12). This concludes the findings from the Lakeside R-I qualitative data collection. The following section summarizes these findings for the reader.

Summary of Lakeside R-I Qualitative Data Findings

Qualitative data analyzed for Lakeside R-I were obtained from focus group interviews and personal interviews with the certified teaching staff. The documents reviewed included (a) their most recent Missouri School Improvement Program (MSIP) advanced questionnaire, (b) school data and statistics downloadable from the Missouri Department of Elementary and Secondary School (DESE) web site (2007c), (c) the Lakeside R-I professional development committee teacher surveys,

(d) past professional development activity agendas, and (e) evaluations of professional development activities.

I conducted two focus group interviews, the first with six members of the K-6 elementary teaching staff and the second with six members of the 7-12 secondary teaching staff. Additionally, I conducted personal interviews with four Lakeside R-I certified teachers, two elementary and two secondary. Data from focus group interviews, personal interviews, and documents reviewed of Lakeside R-I certified teachers were analyzed and sorted into categories and themes. Nine categories were identified:

- The general structure of Lakeside R-I professional development was based upon the guidelines and recommendations of DESE.
- Lakeside R-1 teachers attributed high student achievement to their early curriculum alignment efforts.
- Lakeside R-I teachers perceived that collaboration among teachers throughout the district contributed significantly to meeting the learning needs of students and teachers.
- Lakeside R-I teachers articulated a strong commitment to personal improvement, continued achievement, and students.
- Lakeside R-I teachers considered conferences to be an important aspect to their continued professional growth.
- Lakeside R-I teachers expressed that the district was committed to the increased use of technology to improve instructional practice and student achievement.

- Lakeside R-I teachers deemed the focus and support of district leaders a positive contribution to professional development efforts.
- Lakeside R-I teachers believed that continued improvement was predicated on increasing accountability for self imposed requirements and state mandates.
- Lakeside R-I teachers believed the evaluation of professional development activities could be improved

Chapter 4 of the study has been broken into three sections; this concludes the chapter. The conclusions that emerged from the data analysis and findings are presented in Chapter 6. Chapter 5 follows and describes the selected large district, pseudonym Plainview R-II. The chapter is divided into three sections as was this chapter. The first section contains a thick description of Plainview R-II. The data collected in the quantitative phase of sequential explanatory design along with the data analysis and findings gleaned from the final and qualitative data collection phase in the sequential explanatory design are presented in the last two sections respectively.

Chapter 5

The Story of Plainview R-II

Chapter 4 provided a description of the selected Missouri K-12 small public school district, Lakeside R-I, followed by the findings organized into the categories and themes that emerged from the data. Chapter 5 follows the same format of Chapter 4 with a delineation of the selected site and supporting data. So that others might make decisions regarding the transferability of the study judgments to their own setting, this chapter begins by describing the context of the study site, Plainview R-II, the selected Missouri K-12 large public school district, its community and surrounding area.

Included in these descriptions are the demographics, economy, and the findings from an analysis of the district's (a) total student enrollment; (b) total percentage of students on free and reduced lunch, also known as social economic status (SES); (c) total percentage of students scoring advanced or proficient on state assessment tests in communication arts grades 3, 7, and 11; (d) total percentage of students scoring advanced or proficient on state assessment tests in mathematics grades 4, 8, and 10; and (e) total district expenditures per average daily attendance (ADA). Following these descriptions of the community, surrounding area and school district, is a recap of the research questions that guided the study. The data collection methods and analysis processes are then briefly outlined along with an overview of the findings. The remainder of the chapter details each of the findings along with themes and categories that emerged from the data.

Plainview and Surrounding Area

Plainview, located in south central Missouri, was first settled in the early 1800s. The area surrounding Plainview featured a bit of everything from farmlands to rugged forested hills dissected from beautiful streams. Deer hunters and farmers from Tennessee were among the first settlers. Incorporated in the late 1800s, Plainview soon became a tourist attraction. Travelers were drawn by the natural beauty of the land, its hotels, easy access, and unique attraction.

Schools dotted the early Plainview area “wherever there were enough families willing to chip in and build a log school house, and help pay for teacher.” The first public school was erected in the late 1800s and continued in the same capacity until the late 1900s. Throughout the early 1900s Plainview continued to build upon its appeal to travelers with the addition of more hotels, an “opera house and other buildings, establishing Plainview as a popular place to gather for meetings.”

Modern day Plainview had a population nearing 13,000, nearly half the total county population just over 30,000, with 97% reported as white. The most recent decade saw population growth of approximately 20% in Plainview and the county. Census projections indicated slower, but continued growth in the population. The most recent census data also indicated a relatively young to middle aged population with over 40% between the ages of 25 and 55 while those less than 18 years of age accounted for over 25% of the population.

Manufacturing employed over 30% of the work force and was clearly the prominent industry in and around Plainview. Retail was a distant second and

employed just over 12% of the work force. However, retail did not always take a back seat to manufacturing and this employment picture had only recently occurred. In the late 1980s and early 1990s retail accounted for the employment of over 20% of the work force and was seconded by manufacturing with slightly less than 12% of the employed work force. Local job availability also allowed for approximately 80% of workers 16 and over employment in their county of residence. Conversely, the reported unemployment rate was 5.7% and just above the state average.

Plainview residents enjoyed a number of local amenities including two public pools, numerous parks, tennis courts, and public and private golf course. Residents also had access to 50 churches and a number of civic organizations. Other community services included 7 shopping centers, a daily newspaper, a library and hospital facilities.

Ninety percent of housing was classified as occupied with nearly 70% owner occupied. New and older homes appeared nearly equal in numbers with around 16% housing less than 5 years old and older than 50 years. The median home value was listed over \$76,000 with the majority of homes valued between \$50,000 and \$100,000.

Over 60% of all household incomes ranged between \$15,000 and \$75,000. For those reported to earn less than \$200,000 accounting for 98% of all household incomes, the average household income was reported just over \$36,500. Nearly 14% of all persons in the Plainview area were reported as impoverished which was more than 5% higher than the number of persons reported as having a 9th grade

education or less. The majority (67%) of persons over the age of 25 did not attend college. However, 41% reported educational attainment of high school graduation or GED. The remaining 9% of persons reported educational attainment of a bachelor degree or higher.

This section described Plainview and surrounding area. Plainview was listed as one of Missouri's bigger cities with a population nearing 13,000. Residents benefited from the availability of numerous amenities including shopping centers, recreational opportunities, large meeting locations, a library and hospital. The manufacturing industry was the predominant work force employer followed by retail. While 14% of the area residents lived in poverty, the average household income was over \$36,000. Moreover, area residents were provided with an abundance of churches at which to practice their faith along with a number of civic organizations available to the philanthropic. What follows is a description of the Plainview R-II school district, a large Missouri K-12 public school district.

School District

Plainview R-II was a large K-12 district serving an average student enrollment of over 4600 students in four elementary schools, one junior high school, one high school, and one alternative school. Students of Plainview R-II also had access to a local technical and career center as well as an adult education center for students 16 and over. Both of these facilities were staffed and supervised by district personnel. Plainview R-II had organized its elementary schools by grade configurations as opposed to neighborhood attendance centers. The four elementary schools were organized in grade configurations of PK-1, 2-3, 4-5, and 6. However,

future building projects were predicted to change these grade configurations. Each of the nine sites had their own principal or supervisor. The superintendent of schools was located in the central office building along with other central office staff in a separate facility. District administrative positions listed included the assistant superintendent, director of special education, and the professional development chairperson. I verified that the professional development chair was in fact two full time positions that served as co-chairs.

I observed the school buildings were in generally good condition and appeared to be well maintained. However, Plainview R-II enrollment projections indicated growth to as many as 6000 students by the year 2020. In addition to enrollment projections, the general condition and age of some buildings had precipitated a recent decision by the Board of Education to make substantial investments in the district infrastructure over the next 17 years. A strategic planning committee was formed along with assistance from outside professional support that resulted in the development of a long-range strategic plan for capital improvements. The long-range strategic plan for capital improvements in Plainview R-II was based upon an in depth review of projected enrollment, existing site conditions, and stakeholder input. This plan was subsequently approved by the Board of Education and will result in new buildings, expansions to some existing buildings, and enhancements to others. In all, the Board approved a plan that was to eventually touch all sites, pending voter approval.

Property values, from which Plainview R-II has derived over 40% of their total revenue, increased from over \$218 million to just over \$239 million in the last

five years ending June 2006. In spite of their increased dependence on local funding sources over the last three years, the Plainview R-II adjusted tax rate has remained constant for the same time period and was at \$3.22 per \$1,000 of assessed valuation. This was up from the \$3.02 rate of 2002 and 2003. An increased incidental or general operating levy accounted for this change. Teachers and debt services funds remained constant for the five year period 2002 through 2006. Plainview R-II's combined incidental, teacher, and debt service tax levies were well below state averages for the same time period and for the same combination of state tax rates. This was reflected in Lakeside's increased dependence on local revenue funding sources that were 45.1% of all funding sources in 2006, up from 43.2% in 2004.

Teacher and Administrative salaries had trended up over the last five years ending June 2006. However, this trend continued to remain below state averages for the same reporting periods. The Plainview R-II average total teacher salary was reported at just under \$40,000 and the average administrator salary was reported at nearly \$66,500. This was compared to state averages of \$42,077 and \$75,236 respectively.

District leadership was generally experienced as most administrators reported a number of years in-district experience. Two administrators were reported with one year in-district experience while all others reported over 7 years in-district experience and the majority over 10 years in-district experience. Conversely, the average experience of professional staff was generally evenly dispersed across a range of 0 to 10 years and over 10 years experience.

Forty-eight percent of the teaching staff had 0 to 10 years teaching experience and this was generally distributed equally among those with zero to five years experience and those with 6 to 10 years experience. On the other hand, 52% of the teaching staff reported over 10 years teaching experience; however, 34% of the staff reported over 15 years of teaching experience. This accounted for the average reported teaching experience of 15 years in Plainview R-II.

The Plainview R-II staff certification status was generally equal to the Missouri average certification status reported as a single annual percentage. The average percentage of the Plainview R-II teachers with regular certificates reported for the years 2002 through 2005 was by in large 97% as was the state of Missouri, as reported by the DESE Educator Certification System. Interestingly though, the Plainview teacher certification status dropped in 2006 as did the state's. Fewer than 95% of the Plainview R-II teachers held regular certificates compared to the state average of almost 97% in 2006.

The percentage of classes taught by high qualified teachers in Plainview R-II has trended slightly down over the last five years ending June 2006. The 2002 school year saw a high of almost 99% of classes taught by highly qualified teachers. This was compared to a state average of approximately 96%. While the state percentage has remained relatively constant, Plainview R-II saw a drop to the current percentage of 93% in the school year ended June 2006.

The larger enrollment of Plainview R-II resulted in higher than state averages for classroom student to teacher ratio. The student to teacher ratio was 21 to 1 for the years 2001 and 2002. Students per teacher for the school years 2004

through 2006 was 22 to 1, above the state average of 18 to 1. The students to administrator ratio ranged from a high of 275 to 1 in the 2002 school year to a low of 245 to 1 in 2005. The 2006 administrator to student ratio was reported at 248 to 1. These rates were all considerably above the state average of 203 to 1.

Plainview R-II student attendance rates were relatively constant and close to the state average over the last five years. Plainview R-II student attendance rates ranged from 93% to 94%. Conversely, Plainview R-II graduation rates had fluctuated slightly up and down over the timeframe 2001 through 2006 with a general trend upward for the reported five years. The Plainview graduation rates ranged from a low near 80% in 2002 to a high the following year of over 85%. The most recent graduation rate was reported at slightly less than 85% in 2006 and above the state average of 81.7%. The Plainview R-II dropout rate has remained between three percent and four percent, slightly above the state average during the same time period. Generally between 20% and 35% of Plainview R-II graduates reported attending a two year or four year college or university upon graduation in the reporting years 2002 through 2006. Again, these numbers are below state averages for the percentage of Missouri students entering a two year or four year college or university.

This section described the Plainview R-II school district. Plainview R-II was characterized as a large district with multiple buildings organized in grade level configurations and on the verge of a number of building projects due to projected enrollment increases. This was supported by the increased property value from which Plainview derived an increasing percentage of its financial revenues.

Plainview had a veteran administrative team and a teaching staff equally disbursed among veteran and early career teachers. It appeared; however, that a cycle of retiring teachers was soon to begin as exemplified by the percentage of teachers reported over 15 years of teaching experience. Likewise, it appeared that the trend upward in average teacher pay may have been a function of a veteran teaching staff. Property taxes were relatively stable, yet below state averages. Student engagement was average based upon average daily attendance rates and the graduation rates and may have been affected negatively based upon higher student to teacher ratios. Finally, student post secondary pursuits ranged between 20% and 35% which suggested that more students were pursuing other interests.

Thus far I described the contextual setting for one of the two selected sites for this study, the large Missouri K-12 public school district selected for this study, pseudo named Plainview R-II. The selection of Plainview R-II was based upon an analysis of a number of variables available for download through a DESE web site (2006a). What follows are the analysis and findings related to each variable that led me to select for the purpose of this study Plainview R-II, a large Missouri K-12 public school district.

Plainview R-II Quantitative Site Selection Variables

Once again I attempt to operationalize this study for the reader with a reminder of the purpose for the study. Germane to this section of the study detailing the large K-12 Missouri public school district was the following research question that guided the study:

1. What did teachers in a large high performing, low SES district identify as the critical components of their professional development model for student success?

The reader may also recall that the premise of this study was based upon (a) the identification of selected Missouri K-12 public school districts who had significantly higher student achievement when compared to other Missouri K-12 public school districts; (b) researchers who indicated that the level of family poverty, as measured by students receiving free or reduced priced lunch, was often associated with lower student achievement (Hannaway, 2003; U.S. Department of Education National Center for Educational Statistics, 2006); (c) findings from researchers who concurred on the importance of student outcomes as the basis for the evaluation of professional development (Elmore, 2002; Joyce & Showers, 2002); and (d) the impact of improving teacher quality through “teacher education, licensing, hiring, and professional development” (Darling-Hammond, 2001, Abstract section). Thus, school districts with higher levels of poverty and high levels of student achievement were most likely to have implemented effective professional development models.

This section details the analysis and findings upon which the large K-12 public school district was selected. I remind the reader that the selected district demonstrated the best combination of the five site selection study variables when compared to all other K-12 districts in Missouri and when compared to all other districts in their respective category, those in the small district category or those in the large district category. The following sections will detail in order (a) district

enrollment, (b) social economic status, (c) student achievement, and (d) district expenditures. The student achievement section combines the communication arts and mathematics achievement tests. The site selection variable data sets were gathered from the Missouri Department of Elementary and Secondary Education (DESE) Core Data Collection System database containing information on all 524 Missouri public school districts (Department of Elementary and Secondary Education, 2006a). This study was limited to the 448 Missouri K-12 districts; the remaining 76 districts excluded from this study were configured as K-8 or 9-12 districts. The next section details the analysis and findings from each of the five variables. All specific statistics that reference Plainview R-II are generalized to protect district confidentiality.

Student Enrollment. Plainview R-II enrollment over the time period 2001 through 2005 averaged almost 4300 students. In a simple ranking from 1 to 107 with 1 the smallest average district student enrollment and 107 the largest average district student enrollment in the large district category, Plainview R-II ranked in the 60's. However, Plainview R-II ranked in the 410s based upon total average student enrollment for each of the 448 K-12 public school districts. Plainview R-II was larger than 60% of the districts in the large enrollment category.

The category of large K-12 public school districts included 107 districts that ranged in average total enrollment from the smallest of 1,980 students to the largest of over 40,000 students. The mean enrollment for the category of large school districts was 6,061 students and the median enrollment was 3,674 students. The standard deviation for the large district category was 6,377. This standard

deviation in addition to a mean approximately 2,400 students greater than the median indicated a highly positive skewed distribution with outliers to the high side of the distribution and a condensed population of districts to the low side of the distribution. An examination of the distribution revealed that 70% of the K-12 school districts in the large districts category were in the average student enrollment range of 2,000 to 5,000 students. The strength of the Plainview R-II selection was based upon an average enrollment of approximately 4,300 students that fell within the range of 2,000 to 5,000 students representing 70% of large school districts.

Social Economic Status. The average percentage of students who received a free or reduced price lunch, herein referenced as SES percentage, for the time period 2001 through 2005 at Plainview R-II was 44%. This was above the large district category SES average of 36%. The average district SES percentage ranged from a low of 6% to a high of 83% among all 107 K-12 districts in the large district category. The average SES percentage for all 448 K-12 districts was 44% with a standard deviation of 15 for the period 2001 through 2005. In a simple ranking from 1 to 107 with 1 assigned to the district with the lowest SES percentage and 107 assigned to the district with the highest SES percentage among all 107 K-12 large public school districts, Plainview R-II ranked in the 70s.

The Plainview R-II SES percentage was clearly higher than the average SES percentage for all 107 large districts. Additionally, it closely approximated the average SES percentage of 44% for all Missouri K-12 public school districts. This situated Plainview R-II well among the group of large school districts as a potential

site for study. In particular, Plainview R-II's mean 44% SES was 8% greater than the average large district SES percentage of 36%.

Student Achievement. To this point in the selection of study site participants, Plainview R-II has distinguished itself in the 2000 to 5000 student category among the 107 larger districts. The 2000 to 5000 student enrollment category represented 70% of all larger districts. Moreover, the Plainview R-II SES percentage is more closely aligned to the state average SES percentage for all 448 K-12 districts than it is to the average SES percentage for the 107 larger K-12 Missouri public school districts. Student achievement was then an important variable in further distinguishing Plainview R-II as a site representing the best combination of all five variables for the purpose of this study.

Recall the process outlined in the site selection section of Chapter 3. The student achievement section detailed how each district would be assigned for the years 2001 through 2005, a single value for (a) each grade level MAP achievement test, (b) each content area of mathematics and communication arts, and (c) each district's overall student achievement (see Table A5). It was an analysis of each of these variables that identified Plainview R-II as a top candidate for site selection.

I developed a table listing each district in rank order of its overall student achievement calculated as previously described. Each district was assigned a value of 1 to 107 with 1 assigned to the district that had the highest overall student achievement and 107 assigned to the district with the lowest overall student achievement. Plainview R-II was ranked 36th out of the 107 large K-12 Missouri public school districts (see Table N1 & N2). The top 10 districts were omitted from

the table as each had SES percentages below 20% and were not considered as study sites.

District Expenditures. The reader is reminded that the expenditure variable was used to aid in the site selection process with the selection of a district that had high student achievement, a high SES percentage, and a lower than average expenditure per student. The final criteria used in selecting site participants was current expenditures per average daily attendance. This was previously defined as a single dollar amount calculated for each school district on an annual basis based upon averaged daily student attendance (ADA) divided by total annual expenditures. I calculated a single value for each district by averaging the five annual current expenditures per ADA.

I sorted the remaining 40 top achieving K-12 large Missouri public school districts by current expenditures per ADA. I ranked each these top achieving large districts from 1 to 40 with one assigned to that district with the lowest current expenditures per ADA and 40 assigned to that district with the highest current expenditures per ADA (see Table N3). Plainview R-II had average current expenditures per ADA of \$5626 and ranked ninth in current expenditures per ADA.

Recall that the top 10 performing large districts were omitted from the study as each had SES percentages below 20%. For the curious reader, I did calculate the top 10 performing large district's current expenditure per ADA. The range of expenditures was from a low of \$6,900 and a high of \$14,000. I also ranked each of the top 10 performing large districts in a 1 to 50 order based upon current expenditure per ADA. The top performing large district in terms of student

achievement ranked 50th with the highest current expenditure per ADA among all 107 large school districts. Furthermore, said district was only bested by one other district in current expenditure per ADA among all 448 districts.

Summary of Plainview R-II Quantitative Site Selection Variables

Plainview R-II was selected as the best representative of large K-12 Missouri public school districts for the purpose of this study after a careful analysis of five variables (a) total student enrollment; (b) total percentage of students on free and reduced lunch, also known as social economic status (SES); (c) total percentage of students scoring advanced or proficient on state assessment tests in communication arts grades 3, 7, and 11; (d) total percentage of students scoring advanced or proficient on state assessment tests in mathematics grades 4, 8, and 10; and (e) total district expenditures per average daily attendance (ADA) are also presented. The analysis of these five variables for each of the 107 large K-12 Missouri public school districts concluded with Plainview R-II representing the best combination for further study of the Plainview R-II professional development model to determine which component of said model most contributed to student success. The findings upon which Plainview R-II was selected are summarized as follows:

- the Plainview R-II selection was based upon an average enrollment of approximately 4300 students that fell within the range of 2000 to 5000 students that represented 70% of large school districts, thereby strengthening the transferability of the study products to a larger number of Missouri districts.

- the SES percentage, for the time period 2001 through 2005 at Plainview R-II was 44%, clearly higher than the average SES percentage for all 107 large districts and the same average SES percentage for all Missouri K-12 public school districts.
- Plainview R-II had an 8% higher SES percentage than the average SES percentage for all 107 districts in the large district category.
- Plainview R-II was ranked 36th out of the 107 large K-12 Missouri public school districts in student achievement as measured by the annual state MAP achievement tests over all grades, all subject areas, and for all years 2001 through 2005.
- Plainview R-II had an average expenditures per ADA of \$5626 and ranked ninth in expenditures per ADA with the ninth lowest total expenditures among the top achieving 50 K-12 large Missouri public school districts.
- among the nine K-12 large Missouri public school districts with the lowest expenditures per ADA, from among the top 50 performing districts, Plainview R-1 had the second highest SES percentage. Plainview R-II had the higher achievement of the two districts with the highest SES percentage.

Professional Development Survey

Again I used the survey developed by Lowden (2005), contained in Appendix E. I also used the ASP SurveyMonkey (2006) survey software to administer an online electronic version of the survey. The survey instrument was used to collect descriptive data about Plainview R-II, such as the professional development

process, format, and content. Additionally, the survey instrument presented questions that determined the teachers' perceptions regarding (a) participant satisfaction, (b) participant learning, (c) organizational support and change, (d) change in teacher knowledge, skills, and instructional pedagogy, (e) teacher perception of student learning, and (f) changes in attitudes and beliefs of teachers, based on Guskey's *Model of Teacher Change* (Guskey, 2000). The following sections describe the analysis and findings from each section of the survey.

Response Rate and Participant Demographics. All certified teachers in Plainview R-II were invited to participate in the survey. District administration identified 329 certified teachers that were invited to participate in the survey. Plainview R-II district administration elected to send the initial invitation (see Appendix C) and follow-up to all certified teachers themselves. Participants were initially given 14 days or two weeks to complete the survey. However, inclement weather conditions throughout the state closed many school districts and resulted in power outages, including Plainview's, during the initial time period provided for participants to complete the survey. I extended the opportunity for Plainview teachers to participate in the survey by an additional 11 days.

District administrators advised me that Plainview R-II certified teachers were reminded multiple times after the initial survey participation invitation. Two-hundred-two certified teachers completed the survey for a participation rate of 61%. Demographic data of (a) years teaching experience, (b) years in-district, and (c) grade level taught reported by survey respondents are presented in Table N4.

Professional Development Process, Format, and Content. In Chapter 4 I previously noted that the purpose of the study was to delineate a professional development process model that when broken down to its largest parts elucidates that component of said model that most accounted for implementation of effective instructional practice that led to improved student achievement. I also indicated that an effective professional development process was linked to student achievement and teacher accountability. Plainview R-II teachers were unmistakably aware of their professional development plan and its link to student achievement. Teachers also made the connection between the professional development plan and their accountability for achieving the professional development plan goals. Table N5 details Plainview R-II teacher responses about the professional development and goals.

The design of professional development experiences is an important facet of the process. Plainview R-II teachers indicated that professional development activities were most often during the school year on pre-planned calendar days, most notably prior to the start of the school year. Additionally, over 86% of the teachers responded that they were involved in professional development activities during the school day. Researchers were clear on the importance of job-embedded professional development (Sparks, 2002; Hassel, 1999; Ganser, 2000; Galloway, n.d.; Miller, 1999). Table N6 details Plainview R-II teacher responses on the design of Plainview R-II professional development.

Plainview R-II teachers responded as to the type of professional development they participated in, herein referred to as the format of professional development.

Peixotto and Fager (1998) concluded that the similarities in effective professional development included (a) activities which were intensive and sustained; (b) occurred through collaborative planning and implementation; and (c) engaged teachers in continuous inquiry and improvement. Plainview R-II teachers are involved in these types of effective professional development activities. Over half of the teachers surveyed reported participation in study groups and research (see Table N7). Research literature indicated the more effective models of professional development include such activities as action research, study groups, reflection and teaming (Cook & Fine, 1997; Fine & Raack, 1994; Loucks-Horsley, 2003).

Plainview R-II teachers had mixed reactions when asked who decides the content of professional development. While 46% of the teachers indicated that it was a combination of persons who decided the content of Plainview R-II professional development, a number of teachers indicated otherwise. Researchers indicate that teacher involvement in planning professional development activities was a key to the implementation of effective professional development (Desimone et al., 2002). Plainview R-II teachers did not report major involvement in planning their professional development content. The final question in section one of the survey asked teachers to list the topics of the last three professional development opportunities offered by the school district in which the teacher participated (see Table N8).

Teachers indicated a number of different types of activities they generally engaged in for their professional learning. I categorized their responses into 19 areas of focus that were indicated by Plainview R-II teachers. Some areas of focus

could have been combined into broader categories; however, I desired to indicate the focus of the Plainview R-II professional development activities.

Plainview R-II appeared to have narrowed their professional learning focus. Among the most prominent activities noted by teachers' responses was the emphasis on technology integration into the teaching and learning process. Teachers' instructional practice improvement efforts were clearly evident and quite focused in a number of areas including (a) classroom management, (b) cooperative learning, (c) differentiated instruction, (d) learning styles, and (e) MAX Teaching©. An emphasis on the work of professional learning communities was also evident.

Teachers also reported a number of efforts were specifically focused on communication arts (i.e. reading and writing). Garet, Porter, Desimone, Birman, and Yoon (2001) indicated the strongest relationship between staff development and change in teacher behavior occurred when the feature of staff development included focus on content knowledge, opportunities for active learning, and coherence of the staff development activities. Guskey (2003b) noted similar characteristics in his analysis of 13 different lists of characteristics of effective professional development, all published in the last ten years from a variety of organizations and associations. Of the 21 characteristics cited in the lists, the most frequently cited was enhancement of teachers' content and pedagogical knowledge.

Brian research was another area of focus for Plainview R-II teachers. Researchers reported that opportunities to apply the research on teaching and learning were among the common themes related to effective professional development (Cook & Fine, 1997). Additionally, effective professional development

was no longer considered a learning experience delivered on a particular day, rather continued teacher learning through such models as action research, study groups, reflection and teaming were to be intertwined with the educators' school day (Cook & Fine, 1997; Fine & Raack, 1994).

This concludes the analysis and findings from section one of the professional development survey. Section two of the instrument sought teachers' perceptions regarding (a) participant satisfaction, (b) participant learning, (c) organizational support and change, (d) change in teacher knowledge, skills, and instructional pedagogy, (e) teacher perception of student learning, and (f) changes in attitudes and beliefs of teachers, based on Guskey's *Model of Teacher Change* (Guskey, 2000). The following sections describe the analysis and findings from section two of the survey.

Teacher Perceptions of Plainview R-II Professional Development.

Plainview R-II teachers responded to a variety of questions to assess their perceptions on each of the six categories in section two of the professional development survey. Teachers responses were on a five point likert scale that included five choices (a) strongly disagree, (b) disagree, (c) no opinion, (d) agree, and (e) strongly agree. Statistical analysis was performed on the Plainview teacher perception data to aid in data interpretation. Responses were assigned the values of one to five, one indicated a response of strongly disagree and five represented a response of strongly agree with all others values representing their respective response within the range of choices.

I chose to report findings of Plainview teacher perception data in terms of the percentage of teachers who strongly agreed, agreed, no opinion, etc., in an effort to appeal to a wider audience of readers including classroom teachers who might benefit from the study products. However, for the reader interested in the descriptive statistical analysis of the data see Appendix O.

Six questions were asked of Plainview R-II teachers to determine their level of satisfaction with professional development (see Table N9). Teachers reported high levels of satisfaction with Plainview R-II professional development. Over 85% of the staff indicated they agreed or strongly agreed on all but one question regarding their satisfaction perceptions. There was; however, a small percentage of teachers who strongly disagreed or had no opinion on all questions.

Teacher perceptions regarding their own learning as a result of Plainview R-II professional development were assessed (see Table N10). Again, teachers responded favorably to the questions. New knowledge and skills was the most highly perceived learning that resulted from Plainview R-II professional development. Ninety percent of the teachers surveyed responded agreed or strongly agreed. Some teachers; however, did not believe they learned practical instructional strategies or theory behind the practice from Plainview R-II professional development opportunities.

Guskey (2000) indicated the merit and worth of professional development was in part determined by “knowledge and skills gained by participants and organizational characteristics and attributes that support professional development and change” (Critical Levels of Professional Development Evaluation section).

Teachers responded to their perceptions of the organizational support for professional development and changes (see Table N11). Teachers perceived high levels of support from the various stakeholders. Plainview R-II teachers indicated most perceived support was from the building principals and superintendent. The majority of teachers responded that they had no opinion as to the level of parent support. No less than 70% of the surveyed teachers believed that professional development positively impacted the district and was most often conducted during the school day.

The knowledge and skills gained from participating in Plainview R-II professional development was favorably perceived by teachers (see Table N12). Seventy percent or more of teachers surveyed reported long lasting and positive changes in their teaching resulting from Plainview R-II professional development. Researchers indicated the imperative of learning new skills to improve the teaching and learning needed to address the needs of a changing student population. Corcoran (1995) called educators to “master new skills and responsibilities and to change their practice” (p. 1) as a result of the many reform initiatives to improve student learning. Compounding the need to learn new skills was the quickened pace of change in the diversity of the student population educators serve (Haycock & Robinson, 2001).

A number of teachers claimed no opinion as to the impact of Plainview R-II professional development on student achievement (see Table N13). Teachers responded to eight different questions regarding the impact of Plainview R-II professional development on students. Elmore (2002) contended that given the

imperative to positively impact student achievement, effective professional development “should be evaluated continuously and primarily on the basis of the effect it has on student achievement” (p. 8). Over 70% percent of the teachers agreed or strongly agreed that Plainview R-II professional development had a positive impact on their students’ learning. However, some teachers were less certain as to a correlation between professional development and improved student achievement.

The last survey questions established perceptions on attitudes and beliefs about teaching and learning as a result of Plainview R-II professional development (see Table N14). Teachers indicated that effective professional development changed their attitudes and beliefs about teaching and learning. No less than 93% of the teachers surveyed agreed or strongly agreed that their attitudes and beliefs changed when professional development was personally meaningful and they learned practical instructional strategies. Over 75% of the Plainview teachers surveyed reported agreed or strongly agreed to all questions. Plainview R-II teachers indicated that they clearly understand the benefits of effective professional development.

Summary of Professional Development Survey Findings

The professional development survey developed by Lowden (Lowden, 2005) collected descriptive data about Plainview R-II school variables such as the professional development process, format, and content. The instrument also had questions that determined the teachers’ perceptions regarding (a) participant satisfaction; (b) participant learning; (c) organizational support and change; (d)

change in teacher knowledge, skills, and instructional pedagogy; (e) teacher perception of student learning; and (f) changes in attitudes and beliefs of teachers.

All certified teachers in Plainview R-II were invited to participate in an online professional development survey. District administration identified 329 certified teachers that were invited to participate in the online survey. Plainview R-II district administration sent the initial invitation (see Appendix C) themselves to all certified teachers. District administrators advised me that Plainview R-II certified teachers were reminded multiple times after the initial survey participation invitation. Two hundred two certified teachers completed the online professional development survey for a participation rate of 61%. The findings from the online professional development survey of Plainview R-II teachers are summarized as follows:

- Plainview R-II had a moderately young staff that also reflected the high percentage of teachers with less than 3 years in district experience.
- professional development activities were most often during the school year on pre-planned calendar days, particularly at the start of the school year.
- professional development content for a number of teachers included the more effective professional development formats (i.e. inquiry/action research, peer study groups, mentoring, reflection).
- teachers did not claim an opinion that they were actively involved in the planning of their own professional development.
- teachers reported high levels of satisfaction with Plainview R-II professional development.

- new knowledge and skills was the most highly perceived learning that resulted from Plainview R-II professional development.
- teachers indicated strong support of professional development from the superintendent and building principals.
- most teachers surveyed reported long lasting and positive changes in their teaching that resulted from Plainview R-II professional development.
- a number of teachers did not claim an opinion as to the impact of Plainview R-II professional development on student achievement.
- teachers commonly indicated that Plainview R-II professional development had a positive impact on their students' learning.
- Plainview R-II teachers indicated that they clearly understood the benefits of effective professional development.

Chapter 5 of the study has been broken into three sections; this concludes section two of the chapter. The final section of the chapter presents the data analysis and findings gleaned from the qualitative data collection phase in the sequential explanatory design. Three data collection methods were utilized to obtain information about teachers' perceptions of Plainview R-II professional development during this phase of data collection. The three methods used included focus group interviews, personal interviews, and documents review. The following section presents the data analysis and findings from the qualitative data collected in Plainview R-II. The conclusions that emerged from the data analysis and findings are presented in Chapter 6.

Focus Group Interviews, Personal Interviews, and Documents Review

Qualitative data analyzed for Plainview R-II were obtained from focus group interviews and personal interviews with the certified teaching staff. The documents reviewed included (a) their most recent Missouri School Improvement Program (MSIP) advanced questionnaire, (b) school data and statistics downloadable from the Missouri Department of Elementary and Secondary School (DESE) web site (Missouri Department of Elementary and Secondary Education, 2007c), (c) the district professional development plan, (d) the Plainview R-II professional development committee teacher survey, (e) a sampling of teacher individual development plans, (f) past professional development activity agendas and, (g) evaluations of professional development activities.

I conducted two focus group interviews. The first focus group consisted of seven total individuals that included five members of the K-6 elementary teaching staff and the two resource teachers. The second focus group involved six members of the 7-12 secondary teaching staff. The certified teachers in each focus group also represented their respective buildings, grade level, and/or content area on the district professional development committee. Administrative staff and the resource teachers were asked to recommend certified teacher focus group participants based upon a combination of purposive sampling techniques. Certified teachers were selected using a combination of the purposive sampling techniques nonproportional quota sampling and expert sampling. Recall that the same technique was used in the selection of focus group participants for Lakeside R-I. By combining these two

sampling techniques in the selection of certified teacher participants, I was able to develop a consensus model of the Plainview R-II professional development model.

I conducted personal interviews with five Plainview R-II staff members included two secondary certified teachers, one elementary certified teacher, and the two resource teachers. Teachers were purposively selected based upon their knowledge of Plainview's professional development program. The selection of personal interview participants was based upon the recommendations of focus group participants, the resource teachers, or the administrative staff. The resource teachers were considered elementary teachers for the purpose of the focus group due to (a) their past teaching experience, (b) their comfort level with elementary teachers, (c) the elementary teachers' comfort level with the resource teachers, (d) selection by district administrators, and (e) intimate knowledge of Plainview R-II professional development. Elementary teachers were visibly comfortable with the presence of the resources teachers in the focus group. Nor did elementary teachers defer to the resource teachers' expertise in responding to researcher questions and probes. Interview data were analyzed using the constant comparative method (Lincoln & Guba, 1985) and was facilitated by the use of Microsoft Office suite.

Data from focus group interviews, personal interviews of Plainview R-II certified teachers, and documents reviewed were analyzed and sorted into categories and themes. Six categories were identified: (a) leadership, (b) collaboration, (c) instructional strategies, (d) evaluation, (e) data analysis, and (f) implementation. Within some of the categories several themes emerged. The

remainder of this chapter is organized around each of the categories and the themes within the categories.

Results of Qualitative Data Analysis

Plainview R-II teachers credited district leaders' focus and support vital to effective professional development and improved student achievement. The overwhelming abundance of input and discussion among teachers interviewed included some aspect of leadership. Teachers discussed the leadership category primarily around three themes: (a) support, (b) focus, and (c), "the Janes factor." Each of these themes is detailed in what follows.

Plainview R-II teachers talked often about leadership support. Teachers in their personal interviews and among teachers in both focus groups broached the topic of leadership on more than one occasion. Support was normally discussed in terms of resources, encouragement, and attitude.

The typical comment for teachers regarding leadership support often dealt with the idea of resources. Several teacher comments characterized the point in terms of time and funding. The point of time was exemplified by one teacher's comment in a focus group. In the closing question, I asked teachers if there was anything else they wanted to share. One teacher commented, "They've [leadership] asked 'what do you want?' We told them 'We need more time. Can we have more time in our early release days?' They're going to give us more time. They are really good about helping us."

Another teacher, in a personal interview gave several examples of support in terms of time. The teacher was responding to a question related to leadership

support for district professional development efforts. This teacher shared, “They provide the release time.” “The school calendar is set up to accommodate professional development.” “There’s two full days that have been provided, and in addition this year we have early release times.” “They schedule the learning team time, get substitutes to allow the teachers to be out of the classroom for the learning team.”

Without the benefit of the previous conversation, another teacher shared many of the same comments when asked about leadership support for professional development. This teacher said, “Time, they give us time.” “We have the support of time from building leadership.” “The Board voted for us to have eight early outs with two full days.” This teacher also spoke to the breadth of leadership support for professional development when the teacher said, “One of the things we are very grateful for in this district is that we think leadership from the Board on down is very open to requests that come to them from the PD [professional development] committee.”

Researchers indicated teachers will require between 20% and 50% of their time for professional development based upon the ambitious reform models of improvement required to meet the increasing needs of students (Cook & Fine, 1997). Given the limited resource of time, they also point out the importance of using time in the most effective manner. “In addition to finding creative ways to carve out time for staff development, educators also must explore the most efficient ways to use whatever time is available” (Cook & Fine, 1997, ¶ 4).

In addition to the resource of time, other teachers commented on the funding aspect of support from district leadership. Teachers spoke of funding for various aspects of the Plainview R-II professional development program including specific activities, substitutes, and teacher salaries. A teacher in a focus group echoed sentiments on the breadth of support in addition to the priority of professional development in Plainview R-II when this teacher commented on funding. The statement made was:

PD in our district doesn't just happen. It's a priority in the district. As far as finances, as far as time, as far as all of those things; it is a priority. And if it weren't a priority then we would have a different system entirely than we have now. And not just for the teachers is it a priority, it's a priority for the school Board; it's a priority for the administration too.

In the same focus group, another teacher pointed out another aspect of Plainview R-II funding support for professional development. This teacher stated, "Also the fact that on the salary schedule we get credit for extra PD [professional development] hours." Another teacher in the focus group asserted that the funding was required. A third teacher responding to this comment stated, "They go beyond that in that they do things that other districts don't do."

Teachers also indicated in general terms their appreciation for the encouragement and respect of leadership. Typical of these types of comments was one teacher's statement, "You know they support these things and you know they do because of the way they validate you with praise, recognition, and the fact that they've given us the time." Another teacher shared a similar belief about leadership

support for professional development and the priority given to same. This teacher shared, “It is just an attitude of support, a belief that it’s very important.” Teachers also spoke to the focus leadership brought to professional development planning and implementation.

Plainview R-II teachers discussed focus in terms of administrative requirements and direction related to professional development planning and implementation. Asked to comment on a rationale for the Plainview R-II student performance trend, one teacher, emphasized the role of leadership in recommending professional development activities, said, “The choice from an administrator’s point of view would be to consider the most beneficial methods or methodology that the teacher could use to see an impact [on student achievement]. That choice, I believe is made by the building administration.”

Additional examples provided by teacher comments on leadership focus included this teacher’s statement, “It looks like they really do their research and they know what’s effective in our given situation of having a higher free and reduced lunch rate.” Another teacher made a comment to point out that while district leadership often times did focus professional development efforts, it was done with flexibility. This teacher commented, “Yes, they told us ‘we want professional learning communities.’ They want these groups; but they have let us decide what we want within our groups and that helps.”

Teachers often referenced district leaders as “they.” When asked to identify district leaders, teachers identified such groups or persons as the Board, the superintendent, the principal, and what I have termed, “the Janes factor.”

Plainview R-II employed two individuals as resource teachers, both having the same first name, herein both called by their pseudonym Jane. Teachers often referenced these individuals and their work by the plural, “the Janes.” The Janes were credited with much of the early professional development and curriculum work that culminated in many of the programs referenced by teachers. The programs teachers mentioned specifically included curriculum alignment, learning teams, and professional learning communities.

In a personal interview, one teacher provided the first insight into “the Janes.” The teacher had been asked a question regarding the things educators in Plainview R-II do to improve student achievement. This teacher shared:

“We go over to—now we call them the Janes, Jane [last name] and Jane [last name] – and they tend to point us in the right direction. They will give us strategies to use. They show us how to look at that data; what do we need to do with that data. They’ve been a great resource for us, especially for me being a team leader.

In a separate personal interview another teacher shared a similar belief. Asked how it is determined if professional development was effective, this teacher shared:

I’ve done this with the Janes; I’ve gone over there for the professional development half days and I’ll say ‘you know I tried this in the class and it just didn’t seem to work. Is there something I could have done differently?’ And we will sit there and we’ll just do a round robin discussion session. Or, I could just go to the Janes and do one on one.”

As noted in teacher comments, district and school leadership were identified as a key component of effective professional development and student achievement. Researchers found that school leadership was a contributing factor to student achievement (Marzano *et al.*, 2005). The same researchers also indicate, “The school leader’s ability to select the right work is a critical aspect of effective leadership” (p. 97).

Subsequent to the identification of Leadership as a key indicator of success in Plainview R-II, teachers also identified the importance of collaboration to their improved student achievement. The following section details Plainview R-II teacher perceptions on collaboration and its contribution to student achievement.

Plainview R-II teachers indicated teacher collaboration was imperative for improved student and teacher learning. In his examination of case studies involving students from 5 states, 16 school districts, and 32 schools, Quellmalz and associates (1995) found “most successful schools developed and sustained a culture in which teachers worked collaboratively and actively participated in decisions that directly affected their ability to improve classroom practices” (Analysis and Highlights section). Plainview R-II teachers’ comments indicated that such an environment of collaborative and participatory decision making existed in their schools. The teacher’s comments about their collaborative efforts were varied in specificity. One teacher spoke of vertical teams, others on improved teaching and learning, and one teacher mentioned learning teams.

I have listed collaboration as a single category without the identification of any themes as teachers spoke of varied aspects of collaboration in Plainview R-II. I

found no specific discussion point about collaboration duplicated in personal interviews and the focus group interviews. However, three teachers in separate interviews, all with leadership roles in the district, did speak to collaboration specific to a professional learning community (PLC). I also found reference to a focus on student achievement results in the comments of four personal interviews; however, the context of each comment was based more on individual collaborative efforts rather than a focus on student achievement. These and others are noted in the following section.

In a personal interview, a teacher described a specific collaborative effort termed a “learning team.” The teacher described the structure and one purpose of the learning team in this statement:

Learning team is release time during the day with a sub, and grade level specific. Usually half of the grade meets in the morning, the other half in the afternoon. That is one of the things that are a piece of glue in our district because that’s the one time that district wide everybody’s hearing the same message and getting the same information. For example, when we talk about common assessments; everybody’s hearing the same message.

The opportunity to meet with other grade level teachers was mentioned by another teacher. This teacher shared the importance of that opportunity in this statement, “working with the vertical alignment; where I can talk to the high school teachers and the sixth grade teachers; we can make sure there are no big gaps.” When asked what constitutes effective professional development, another teacher shared the importance of camaraderie among teachers meeting in collaborative

groups. This teacher said, “I think what’s most important for our group; first of all you have to have camaraderie within your group. If you don’t have that, it doesn’t matter how long you sit there.” Researchers agree, “Most of the useful strategies will require the cooperation of the school as a whole; teachers cannot implement most of these strategies working alone in isolated classrooms” (Lezotte, 1991, p. 2).

Three Plainview R-II teachers also referenced professional learning communities (PLCs) in their discussions of professional development that increased student achievement. Hord (1997a) described a PLC as “the teachers in a school and its administrators continuously seek and share learning, and act on their learning” (section Introduction, ¶ 3). In her description of shared personal practice, a component of professional learning communities, Hord (1997b) indicated:

Teachers share their practice and enjoy a high level of collaboration in their daily work life. Mutual respect and understanding are the fundamental requirements for this kind of workplace culture. Teachers find help, support, and trust as a result of developing warm relationships with each other.

(Shared Personal Practice section, ¶ 2).

One teacher described a PLC as a specific professional development effort to improve student achievement. This teacher described the structure of a PLC in this comment: “We meet once a month with the PLCs; Professional Learning Communities. There’s an early out the first Tuesday or Wednesday of every month. All the teachers will meet. We’ll have a small discussion about the department.” A second teacher indicated “I think every PLC department does this; they get [student] data back and analyze it.” This teacher also added, “we’re not doing as

well as we need to be; we're just getting started." A third teacher expressed initial reservations about the implementation of PLCs. This teacher said, "I was very hesitant when this [PLCs] started out; when they're [district leaders] like, 'we're going to be a PLC.' I have been shocked that it is working as well as it is."

Plainview R-II teachers noted the value of sharing ideas and strategies during their opportunities to collaborate. Asked about professional development processes in Plainview R-II that improve student achievement, a teacher said, "I hope that my achievement improved because of getting to collaborate with other teachers; getting to talk about their ideas, what worked for them." This teacher added, in a subsequent question, "in fact another teacher and I this year will give the same test. We give the same notes. We're exposing our students to the same thing, which is the first year of doing that."

While the reader may be tempted to overstate the obvious common sense exemplified by this teacher's statement, Schmoker (2006) cautioned us with his finding that in spite of state and local standards, most teachers did not teach the same thing. This type of focus was echoed by another teacher who said, "Once we do get in these groups, the collaboration is very beneficial. You can get a lot of things done. You make sure your class and my class learns the same things."

Plainview R-II teachers also gave examples of their focus on student achievement as the basis for change. Sparks (1994) concurred with this process in his call for a shift from staff development based upon educators perceptions to "determining the things students need to know and be able to do and working backward to the knowledge, skills, and attitudes required of educators if those

student outcomes are to be realized. (Changes in Staff Development section, ¶ 9). Indicative of this call for change, one teacher commented, “We get together and look at MAP scores. Getting people to understand that if it’s a third grade test, kindergarten, first grade, second grade, and third grade are all team members in those third grade scores.” Asked about professional development processes that contribute to improved student achievement, another teacher shared, “If my kids did really good on solving equations and the other teacher’s class did very poorly; we look what did you do different; what can we do.”

The importance of collaboration was also noted by teachers in a focus group. In their focus group, elementary teachers came to consensus on the graphical representation of the Plainview R-II professional development model (see Appendix P). One component of their model was specifically labeled *Collaboration*. Asked which component of the model most influenced improved student achievement, one teacher stated, “Working with fellow teachers and hearing what they’re doing, and seeing how they are implementing things.” One teacher in another focus group summed it up in one of the group’s closing remarks with the statement, “We’re used to teaching in such isolation; thank goodness it’s not that way anymore.”

In his review of professional development Corcoran (1995) indicated, “Reform efforts are dramatically raising expectations for students, and consequently, for teachers. Teachers need to deepen their content knowledge and learn new methods of teaching. They need more time to work with colleagues, examine the new standards, and to revise curriculum” (¶ 1 & 2). Teachers in Plainview R-II indicated their commitment to collaboration. One aspect of their collaboration was the

improvement of their own practice. The following section discusses the specifics of their commitment to increased use of effective instructional practice.

Plainview R-II teachers acknowledged the district commitment to increased use of effective instructional practice. Researchers indicated effective instructional practices were those that “have a high probability of enhancing student achievement for all students in all subject areas at all grade levels” (p. 6-7). Marzano and associates (2001) also outlined nine effective instructional strategies, previously listed in the literature review, as identified in the McREL study. Additionally, the researchers also indicated that none of the identified strategies work all the time and in all circumstances.

One teacher shared the variety of instructional practices available to Plainview R-II as a response to my question seeking a rationale for the continued gains in student performance. This teacher said, “The fact that we are given so many different models to choose from; if one doesn’t work with one set of students, we’ve something else to fall back on. We’ve been given all these strategies like Marzano.” Another teacher indicated that building leaders received the same training on instructional strategies. Asked how professional development was deemed effective or not, one teacher indicated, “When we started doing the Marzano strategies, we did spend some time training the principals.” In a different interview, a teacher was asked to comment on professional development processes in Plainview R-II that encouraged increased student achievement. This teacher responded, “I had a bit of a handle on cooperative learning from college. I didn’t

know what the best practices were. They [leadership] gave me the tools that I could use to increase student achievement through Marzano.”

Teachers also made reference to an instructional practices inventory (IPI), some referred to the same thing as an instructional classroom inventory (ICI). The documents review included two artifacts related to IPI: (a) instructional practices rubric and (b) instructional practices inventory. Both were also available online in a similar format from the University of Missouri, Columbia, through Dr. Jerry Valentine at the Middle Level Leadership Center (Valentine, 2004).

The instructional practices inventory was used by trained Plainview R-II staff to gather data, through classroom observations. Data sought was based upon the six categories of the IPI developed by Dr. Jerry Valentine and Dr. Bryan Painter in 1995-96 (2004), “The IPI Consists of Six categories that distinguish between the types of learning experiences in which students are engaged.” The six categories were: (a) student active engaged learning; (b) student learning conversations; (c) teacher-led instruction; (d) student work, with teacher engaged; (e) student work, with teacher not engaged; and (f) complete disengagement. Additionally, the Plainview R-II staff expressed knowledge of this instrument and the rubric used to determine the level of instructional practice as measured by the use of the IPI inventory.

Based upon the question about professional development processes that encouraged increased student achievement, one teacher went to great lengths to explain the instructional practice inventory. An excerpt of that conversation follows:

That IPI is a huge piece we just added at the end of last year. It's the instructional classes inventory. It is actually an inventory of whether or not the PD strategies that are research based actually were implemented. We do it several times a year; you just inventory your building. It's different from a spot check. It's what you see when you first walk in the room; you code that. The goal is for your building to have a 3 to 1 ratio, based upon research on effective schools. When you walk into a room a 4 would be direct teacher instruction: lectures, question-answer. The quality of the teacher instruction isn't coded. A 5 is students having conversations that may have been stimulated by the teacher or they're not being directed by the teacher. A 6 is higher order work that might involve cooperative learning activities. So, 4, 5, and 6; teacher led instruction: student conversations building knowledge; higher ordered thinking authentic. A 1 is complete disengagement, which could be a matter of not just kids gone wild, although that could be part of it, but it could be disengagement from the curriculum. Twos are students, working without teacher's help, like working on a worksheet and the teacher is not available to help. That could be a test. And a 3 is students working on worksheets at their seats and a teacher is helping. Now 1s, 2s and 3s [is one group and] 4s, 5s and 6s [another group] in a highly successful school you have a 3 to 1 ratio.

I understood the grouping to indicate the goal was three observations rated four, five or six, for every one observation rated one, two or three. Another teacher expressed the value of the IPI tool in the statement, "in the recent years the IPI has

really informed our practice.” The use of effective instructional practices identified by Marzano (2001) and the use of the IPI (Valentine, 2004) tool to monitor implementation were not the only instructional strategies noted by Plainview R-II teachers.

A Plainview R-II teacher also mentioned the use of MAX teaching strategies. MAX teacher strategies were developed by (Forget, 2006). He indicated MAX “is an acronym stands for Motivation, Acquisition, and Extension,” and was intended “to level the playing field by raising the bar for all students, in a classroom environment that provides skill instruction to enable improved performance while engaging all students in active learning from textbooks and other forms of textual matter” (section What does MAX stand for?).

Commenting on MAX teaching, one teacher said, “In the MAX teaching we are required to use two methods a week; two different methods a week in two different class periods minimum. Sometimes you get the bare minimum, sometimes you get in three or four; it just happens that way.” This teacher later added, “The first year they [Dr. Forget and associates] came in and we had a whole day. Then about the beginning of October he came back and observed; it was beneficial.” Research appears to support the efforts and professional development practice of Plainview R-II.

Research in the area of effective instructional practice also included the study of pedagogy or “a combination of knowledge and skills required for effective teaching” (Chapuis, 2003). Others were of the same mind as it related to the importance of pedagogy to address the needs of all students (Dalton, 1998; Darling-

Hammond, 1997a; Marzano, 2003). That said, Darling-Hammond (1997a) concluded that instruction was “effective or ineffective by the knowledge, skills and commitments of those in schools” (p. 7).

This section described Plainview R-II teacher perceptions on instructional practice. Teachers spoke of the variety of depth of training in effective instructional practices. Their efforts to improve teaching generally focused on the work of Marzano (2001); however, other research based professional development was noted by teachers. Teachers also indicated the opportunity to improve their professional development focus with the use of the instructional practices inventory. Another aspect of improvement that teachers discussed was the evaluation of teaching and learning. The next section describes teacher perceptions on evaluation.

Plainview R-II teachers held evaluation as a critical component in improved teaching and learning. Several teachers commented on the value of evaluation in terms of teacher evaluation and the evaluation of student achievement. Both focus groups discussed the topic of teacher evaluation at considerable length, while the predominance of discussion on the evaluation of student achievement was discussed in the personal interviews. I identified two themes related to Plainview R-II teacher perceptions on evaluation: (a) evaluation of teachers and (b) evaluation of student achievement. The following section describes teacher perceptions based upon the identified themes.

The elementary teacher focus group consensus professional development model identified one component titled *Evaluation*. Asked which component of the model most influenced improved student achievement one teacher commented, “You

don't know whether teachers are implementing the professional development unless you do an evaluation of individual teachers." Another teacher nodded and said, "You have to evaluate it." Continuing on this theme a third teacher added, "I just think that evaluation does have something to do with student achievement."

This exchange indicated Plainview R-II teachers were trying to answer the question researchers pose as to the effectiveness of any professional development activity. In their report summarizing research on professional development for the School Improvement Branch, Basic Learning, Alberta Education, the InPraxis Group (2006) stated, "According to a consistent consensus of expert opinion, any professional development program should be able to answer the ultimate question — 'Does our professional development have a positive effect on student learning?'" (p. 35). The elementary focus group teachers were not the only teachers to struggle with this issue.

Teachers in the secondary focus group developed their consensus model of Plainview R-II professional development (see Appendix Q). Their discussions centered on implementation which is dealt with in another finding. More to the point; however, when asked how the model might be improved, one teacher responded, "When the professional development monies are used and thousands of dollars are spent for some new strategy, somebody needs to be paying attention to see that teachers are using that strategy." Another teacher continued this line of conversation with the comment, "At least at the local level, there would have to be, one hates to use the term 'monitoring system,' put in place; but there does need to be some kind of check to see that these things are being used."

Teachers also discussed evaluation in terms of student achievement; however, they referenced the evaluation of student achievement as a means of determining the effectiveness of their professional development. Recall the elementary focus group specifically designated the component *Evaluation* on their consensus professional development model. When asked how the model might be changed to increase student achievement, referring to the components on the model, one teacher responded, “We’ve got evaluations going back and forth, but all of a sudden it’s occurred to me we started with the goals for student achievement we want to evaluate. There ought to be a line going from evaluation straight to goals.” Another teacher followed up on the previous comment with the statement, “I think that it’s crucial that we get evaluation hooked up with goals pretty directly. Otherwise all we’re doing is evaluating the PDs and not evaluating how PDs effects student achievement, which is what our goals are usually set around.”

Teachers interviewed individually also made this connection to student achievement. Questioned how professional development was considered effective, one teacher shared, “Effectiveness I guess would have to be directly measured through the achievement of the students. I don’t see how one could measure the effectiveness of that with any other method. The reason for that [professional development] is just to improve students’ achievement.” In a separate interview of another teacher, asked the same question, this teacher said, “Probably classroom performance would be my number one. If the kids aren’t getting what they need to be getting, then it’s not effective.”

Plainview R-II teachers established a link between professional development and student achievement by their comments. Additionally, teachers indicated that evaluation of teachers was prudent to ensure classroom implementation of specific strategies taught and reinforced through professional development activities. The following section speaks more about their perceptions on student achievement and the importance of data analysis.

Plainview R-II teachers attributed high student achievement to their continuous analysis of student data. The consensus model of professional development created by each focus group made reference to data analysis. The elementary focus group model had one component labeled *Needs Assessment* (see Appendix P). The secondary focus group model had one component labeled *Analyze New Data* and another component labeled simply *Data* (see Appendix Q). Each of the models indicated a relationship between data analysis and the evaluation or establishment of goals. This was briefly mentioned in a previous finding on evaluation.

A teacher in one of the focus groups commented on the accuracy of the model they had just created. This teacher said, “All of it [pointing to the model]; for all of it to happen we established that we like to look at the data first and then figure out what we need to do, then develop strategies.” Another teacher added, “Then analyze that data to make sure that we’ve achieved our goals, and if we haven’t, then we need to establish new goals.” Teachers who were interviewed individually also expressed the importance of data analysis.

Asked what educators do to improve student achievement, one teacher said, “We look at the data. We analyze the data. We look for reasons why it [student achievement] might be strong or weak and then put a focus on those areas.” Another teacher responded to a question about determining the effectiveness of professional development. This teacher said, “We examine common assessment questions. We make sure the same material is being taught to them [students]. You can gather that data and analyze that data. I think it gives a good representation of how one is doing in those courses.”

Plainview R-II teachers also looked at state assessment data as a faculty. One teacher described it this way: “In the fall every year we have a day of data analysis when the MAP scores come back. Everybody looks at the scores even if they weren’t a MAP tested year.” This description was provided in answer to a question on processes used to improve student achievement.

Not unlike the use of data analysis at Plainview R-II, researchers indicated “majorities of superintendents and principals reported using state test data to identify areas for improvement and to target instructional strategies” (Marsh *et al.*, 2006, p. 6). In their analysis of four studies that represented a sample of educators at the district, school and classroom level, Marsh and associates (2006) cautioned educators on their use of data-driven decision making (DDDM).

Further, it is not clear that all educators have the necessary elements of successful DDDM practice at their disposal. These include the skills, time, and motivation to analyze and interpret data; access to data that are timely

and valid; and a repertoire of alternative actions to invoke when they detect a problem (p. 9-10).

Plainview R-II teachers' use of data was supported in research literature; however, I did not explore their ability to use the data as part of this study. The professional development model developed by each focus group demonstrated their understanding of data analysis and its appropriate use. There were some indications in their discussions on data on the importance of implementation. The following section presents the final finding and the perceptions of Plainview R-II teachers on implementation of new learning.

Plainview R-II teachers believed implementation of new learning was important to improved student achievement. Retired superintendent J.C. Ernst Ed.D., (personal communication, October 2004) often quoted, "If it is worth doing, it is worth doing poorly." The point herein was not an encouragement to do things poorly. Rather, based upon well-founded research, data analysis and proper planning do not wait for perfection to implement, as one will never implement or implementation will be inextricably delayed. Plainview R-II teachers expressed similar sentiments on the importance of implementation.

This finding was the result of focus group conversations about their consensus professional development models. No individually interviewed teachers broached this topic. I have included this finding based upon the number of persons who commented on same and the importance ascribed to implementation by the focus group participants. Teachers' responded "implementation" almost exclusively

based upon the question, “Which if any, of the components depicted in the graphical representation most influence improved student achievement?”

The secondary teacher focus group consensus model (see Appendix Q) had a component specifically labeled *Implementation*. What follows are responses from different teachers who responded to the question regarding which component most influenced improved student achievement. The different teachers who responded are identified alphabetically starting with a comment from teacher A:

Because of the sheets [paper used to develop graphical model] we have up there, the one that has direct student impact is the implementation. The rest involve teachers working together, collaborating, and coming up with things. I’m saying what we need to do is take that [instructional strategies] back into the classroom and implement and that’s what has the impact on the kids.

Teacher B, “If you have to pick one it’s probably implementation.” Teacher C, “If you know it and never use it what good is it? It’s not any good [speaking of implementation].” Teacher D, “If you never implement it then it doesn’t do you any good. You don’t do the students any good.” Each of these teachers made additional comments of the same nature as part of a conversation between members of the focus group. This conversation continued for approximately 30 minutes during the focus group interview.

One elementary teacher in the elementary focus group concurred with the secondary teachers. While the elementary model did not include a component labeled implementation, when asked how their model might be improved, this teacher said, “You have to implement first.” Another teacher in the focus group

summed it up with the statement, “We can have great goals; we can evaluate until the cows come home, but if we don’t implement what we’ve been trained to do, then it’s not going to effect student achievement.”

Teachers in each focus group were adamant as to the importance of implementation. While respectful and professional, their tone and body language expressed their conviction.

Summary of Plainview R-II Qualitative Data Findings

Qualitative data analyzed for Plainview R-II were obtained from focus group interviews and personal interviews with the certified teaching staff. The documents reviewed included (a) their most recent Missouri School Improvement Program (MSIP) advanced questionnaire, (b) school data and statistics downloadable from the Missouri Department of Elementary and Secondary School (DESE) web site (Missouri Department of Elementary and Secondary Education, 2007c), (c) the Plainview professional development committee needs assessment, (d) past professional development calendars, (e) instructional practice inventory rubric, and (f) instructional practice inventory data collection matrix.

I conducted two focus group interviews, the first with four members of the K-6 elementary teaching staff and two resource teachers. The second focus group consisted of seven members of the 7-12 secondary teaching staff. Additionally, I conducted personal interviews with five Plainview certified teachers, one elementary, two secondary and two resource teachers responsible for the Plainview R-II professional development program. Data from focus group interviews, personal

interviews of Plainview R-I certified teachers, and documents reviewed, were analyzed and sorted into categories and themes. Six categories were identified:

- Plainview R-II teachers credited district leaders' focus and support vital to effective professional development and improved student achievement.
- Plainview R-II teachers indicated teacher collaboration was imperative for improved student and teacher learning.
- Plainview R-II teachers acknowledged the district commitment to increased use of effective instructional practice.
- Plainview R-II teachers held evaluation as a critical component in improved teaching and learning.
- Plainview R-II teachers attributed high student achievement to their continuous analysis of student data.
- Plainview R-II teachers believed implementation of new learning was important to improved student achievement.

This section concludes Chapter 5. Chapter 6 contains the conclusions and implications of the study.

Chapter 6

Conclusions and Implications

This chapter will be written in a manner that we may walk together in a discussion of the conclusions and explorations for implications. I begin the discussion with a brief review of the study. The following sections briefly review the (a) purpose of the study; (b) problem statement and research questions; (c) methodology; (d) Lakeview R-I, small district study site; and (e) Plainview R-II, large district study site.

Purpose of Study

I began my work with an introduction to the problem that would be addressed by this study. I demonstrated that in spite of what we know about teaching and learning, the core of how teachers teach and students learn has not changed on any widespread scale in the last 40 years to significantly impact school improvement over an extended period of time (Darling-Hammond, 1997b; Elmore, 2000; Elmore, 2002; Guskey, 2002). I followed with evidence that suggested others have successfully addressed this problem, in some cases and on a limited basis, with “well-designed and well-supported professional development component” (Guskey, 2002, p. 4).

Problem Statement

Therefore, the purpose of this study was to describe what teachers identified as the critical components of their professional development model that positively impacted student achievement. This study was conducted in two high performing,

low SES K-12 Missouri public school districts, one large and one small. The following research questions guided the study:

1. What did teachers in a large high performing, low SES district identify as the critical components of their professional development model for student success?
2. What did teachers in a small high performing, low SES district identify as the critical components of their professional development model for student success?

Methodology

I used a mixed methods research design and a sequential explanatory data collection strategy, in that the quantitative component was intended to explicate the context and provide stimulus and momentum for the subsequent qualitative phase of the study (Creswell, 2003). District and student data sets were collected for years 2001 through 2005 for all K-12 Missouri public school districts.

I selected study sites based upon an analysis of the following five variables: (a) total student enrollment; (b) total percentage of students on free and reduced lunch, also known as social economic status (SES); (c) total percentage of students scoring advanced or proficient on state assessment tests in communication arts grades 3, 7, and 11; (d) total percentage of students scoring advanced or proficient on state assessment tests in mathematics grades 4, 8, and 10; and (e) total district expenditures per average daily attendance (ADA).

Univariate analysis described “each variable in a data set, separately” (Saint-Germain, 1997). Each data set was analyzed using the three major characteristics

of distribution, central tendency, and dispersion (Calkins, 2005). The goal of these analyses was to identify two, one large and one small, K-12 school districts to study. I selected two sites demonstrating the best combination of these variables. My final determination was based upon two districts that had high student achievement and a high percentage of students in poverty.

All certified teachers in the two selected K-12 school districts were invited to participate in an online professional development survey to ascertain the thoughts and perceptions of respondents pertaining to their professional development model and those aspects of same that most contributed to the implementation of effective instructional practice that improved student achievement. Additional qualitative data was collected through a focus group activity and questions, personal interviews, and documents review.

Lakeside R-I

This study took place in two communities and their respective school districts. The small district, Lakeside R-I was selected based upon:

- student enrollment well within one standard deviation of the mean enrollment of for the category of small school districts and nearly equaled the median enrollment of all districts.
- an SES percentage well within one standard deviation of the mean SES percentage for the category of small school districts and the mean SES percentage for all districts.
- student achievement ranked 15th among all districts in the category of small school districts.

- the second lowest total expenditures among the top 25 achieving districts in the category of small school districts.

The smaller district of Lakeside R-I and the surrounding area was described as an old rural community steeped in its European heritage and traditions. The school district was situated in small rural Missouri community, herein pseudo named Lakeside, near the mid section of the state. The Lakeside community continued to reflect its strong European heritage in a 98% white population and inhabited by just over 1,000 residents from among over 4,000 persons residing within the boundaries of the school attendance area and a surrounding county population of over 18,000. Lakeside R-I was a small K-12 district serving an average student enrollment of over 700 students on a single campus setting.

The administrative staff and a teaching staff were well represented by veteran teachers that may be nearing retirement. Student engagement appeared high based upon average daily attendance rates and the graduation rates as well as being supported by low student to teacher ratios. Finally, student post secondary pursuits were reported as equally split between continued educational endeavors and other interests.

Plainview R-II

The large school district, Plainview R-II was selected based upon:

- average enrollment of approximately 4300 students that fell within the range of 2000 to 5000 students that represented 70% of large school districts.

- the SES percentage clearly higher than the average SES percentage for the category of large school districts and the same average SES percentage for all Missouri K-12 public school districts.
- student achievement ranked 36th in the category of large school districts.
- expenditures were the ninth lowest among the top 50 achieving districts in the category of large school districts.
- among the nine lowest expending districts, from among the top 50 performing districts, Plainview R-1 had the second highest SES percentage. Plainview R-II had the higher achievement of the two districts with the highest SES percentage.

Plainview R-II was located in south central Missouri. The community population was nearing 13,000, nearly half the total county population just over 30,000, with. Plainview was listed as one of Missouri's bigger cities with a population nearing 13,000 and 97% white. Residents benefited from the availability of numerous amenities including shopping centers, recreational opportunities, large meeting locations, a library and hospital.

Plainview R-II was a large K-12 district serving an average student enrollment of over 4600 students in four elementary schools, one junior high school, one high school, and one alternative school. Students of Plainview R-II also had access to a local technical and career center as well as an adult education center for students 16 and over. Plainview R-II enrollment projections indicated growth to as many as 6000 students by the year 2020 and on the verge of a number of building projects due to projected enrollment increases.

Plainview had a veteran administrative team and a teaching staff equally disbursed among veteran and early career teachers. Student engagement was average based upon average daily attendance rates and the graduation rates and may have been affected negatively based upon higher student to teacher ratios. Finally, student post secondary pursuits ranged between 20% and 35% which suggested that more students were pursuing other interests.

This section presented a summary of the study. What follows are the study conclusions that emerged from the data analysis and study findings across both districts. The study conclusions were derived through an inductive process of review. Conclusions emerged from all study findings and through all data collection strategies, in both districts. It is at this interpretive point in the study that I combine the relevant quantitative and qualitative data. Additionally, relevant literature is woven into the conclusions where applicable.

Conclusions

The following conclusions are drawn from a combination of quantifiable data sources previously explained and the sum of teacher perceptions as systematically interpreted through focus groups, personal interviews, and documents review. These combined data were gathered from two K-12 Missouri school districts, one large and one small. The transferability of these conclusions is dependent upon the contextual setting from which they were derived. The reader is encouraged to carefully review the description of each site to determine the transferability of the study products from these districts to your own or others. However, this study's products were the result of a systematic process of site selection, participant

selection, data collection, and data analysis. As such, the study products may be viewed as a larger body of knowledge to inform other similar districts in their improvement efforts.

In the following sections I will outline six conclusions that emerged from my data analysis and study findings. These conclusions will focus on (a) collaboration as a key professional development process, (b) leadership as an important element of effective professional development, (c) the relationship of professional development to student achievement, (d) the importance of technology and curriculum alignment, (e) evaluation as an essential element of improved teaching and learning, and (f) the continuous acquisition of new learning and skills development.

Collaboration is a key professional development process for improving teaching and learning in Lakeview and Plainview. Teachers believe the key to improving their professional practice and student achievement rests in their opportunities to share (a) ideas, (b) knowledge, (c) skills, and (d) problems with each other. They stress the need to focus their time together on specific issues. Issues that teachers highlight as the focus of collaborative efforts include (a) instructional practices improvement, (b) problem solving, (c) curriculum development, (d) curriculum alignment, (e) student achievement data analysis, (f) individual students, and (g) groups of students. In particular, teachers indicate the importance of collaborative efforts and their impact on student achievement. Teachers in the large district tend to make this connection more directly when they start with student data as the basis of their decisions. Teachers in the small district tend to

see teacher improvement as the primary goal of collaboration that leads to improvement in student achievement.

Researchers are clear on the focus of teacher collaboration. In his analysis of 13 lists from researchers and research organizations who have identified their characteristics of effective professional development, Guskey (2003a) suggested, “For collaboration to bring its intended benefits it, too, needs to be structured and purposeful, with efforts guided by clear goals for improving student learning” (p. 11). Sparks (1994) concurred with this process in his call for a shift from staff development based upon educators perceptions to “determining the things students need to know and be able to do and working backward to the knowledge, skills, and attitudes required of educators if those student outcomes are to be realized. (Changes in Staff Development section, ¶ 9).

Teachers at both districts believe it is important for their focus on specific issues during their collaborative time to be addressed among (a) grade level teachers, (b) between different grade level teachers, (c) among content specific teachers, (d) between different content teachers, (e) among entire building faculties, and (f) among K-12 representative faculty members. This belief is supported in the literature. “Most of the useful strategies will require the cooperation of the school as a whole; teachers cannot implement . . . strategies working alone in isolated classrooms” (Lezotte, 1991, p. 2).

In the graphical representation of their district’s professional development model, teachers indicate that collaboration is a part of the model. Teachers in the large district tend to be more overt in the identification of collaboration as part of

their professional development model. Teachers in the large district tend to speak in terms of professional learning committees and learning teams while teachers in the small district tend to speak in terms of meeting or collaborating.

While the same overt patterns of identifying collaborative efforts exist among all participant teachers in the large and small district, it appears that the companionship and warmth of collaborative efforts are even more evident between elementary rather than secondary teachers. Elementary teachers tend to speak in more personal terms while secondary teachers tend to speak in more business like or professional terms. This is not to imply either is less personal or professional, merely to indicate the difference language use, body language, and tone. A classic example of the collaborative spirit among teachers is summed up in “We’re used to teaching in such isolation; thank goodness it’s not that way anymore.” Morris (1997) emphasizes the importance of collaboration when he states that collaborations bring out the best in ourselves and our partners in a "synergistic interaction" (p. 61) to accomplish our highest capability. He concludes that collaboration is the multiplication of our hand and minds.

Leadership is an important element of effective professional development that improves student achievement in Lakeside and Plainview. Just as strongly and often as teachers speak of collaboration, so too do teachers share the benefits of strong leadership in their improvement efforts. Teachers overwhelmingly believe leadership provides two important and primary qualities: (a) support and (b) focus. Teachers stress the importance of moral support or encouragement for their improvement efforts in an environment often times wrought with the stress of

mandated testing and high expectations. Teachers feel encouraged and motivated to ask questions, discuss problems, take risks, and try new things based upon the support and encouragement of building leaders. Marzano and associates (2005) outlined 21 responsibilities for school leaders. Among them was the responsibility of affirmation. The researchers specifically delineated a behavior associated with affirmation as “systematically and fairly recognizing and celebrating the accomplishment of teachers” (p. 44).

Teachers also indicate the need for resources to support their improvement efforts. Teachers speak predominately of time and funding as the two most appreciated forms of resource support. Teachers recognize these resources are limited and dependent upon the priorities of community, Board and district leadership. Teachers are quick to share the acknowledgement and praise of community, Board and district leadership for placing a priority on continued teacher learning and improvement. Survey data from both districts corroborates this assertion as the majority of teachers indicated strong support for professional development from the district and building leadership. Another one of the 21 responsibilities reported by Marzano and associates (2005) in their meta-analysis of research was that of resources. The researchers indicated they found a significant correlation between leadership’s provision of “material and professional development necessary for the successful execution of their jobs” (p. 43) and student academic achievement.

Teachers also identify the need for building leaders to verify implementation of new learning. Teachers often speak of this in terms of evaluation or

accountability; both are addressed in more detail in a later conclusion. However, the point teachers wish to impress upon building leaders is the need to ensure the effective and efficient use of resources. In this case, resources that are spent on new teacher learning and the need to verify that new learning is properly implemented as intended. Among those leadership responsibilities that had the strongest correlation to student achievement was that identified by Marzano and associates (2005) as monitoring and evaluation.

Teachers view professional development planning as a team effort that involves leadership. Teachers indicate the imperative of leadership direction and guidance to address the needs of individual buildings. Teachers desire to have a voice in the planning of improvement efforts that will directly impact their business of teaching and learning. However, they also value the insight and overview that leadership brings to the planning efforts of district or building professional development activities. Interestingly though, teachers surveyed in the small district reported involvement in the planning of their own professional development while teachers in the large district did not indicate they were involved in the planning of their own professional development. Marzano and associates (2005) also speak to the leadership responsibilities of focus and input. Focus speaks to “clear goals” while input addresses teacher involvement in “important design and implementation” (p. 43) decisions.

Teachers in the large district also took advantage of additional resources in the form of specific persons available to support their professional needs. Teachers in the large district spoke highly of this additional support provided by

professionals who were well trained in specific instructional practices, data collection, group facilitation, and curriculum evaluation and design. As a result of this additional resource in the larger district, teachers and building principals were intentional in the design, implementation, use, and evaluation of many research based instructional practices. Teachers surveyed in the large district reported more sustained and long-term use of new learning than did teachers in the small district.

A disparity exists among the districts about the relationship of professional development to student achievement and the goals of professional development.

Teachers in the large district speak frequently of student achievement results as the basis of professional development planning. They also report the success or failure of classroom implemented new learning in terms of student achievement and understanding. Data analysis of student achievement results is a key component of the large district professional development model developed by the elementary teachers and the secondary teachers. These professional development process models further indicate the analysis of student achievement data is the basis for setting goals and targeting professional development activities. Nearly 74% of teachers surveyed from the large district reported that professional development has a positive impact on student achievement; however, 21% of teachers did report no opinion. When asked how professional development was determined effective or not, one teacher in the large district stated, “Probably classroom performance would be my number one. If the kids aren’t getting what they need to be getting, then it’s not effective.”

The research literature is replete with examples on the importance of basing determinations of effective professional development on improvements in student achievement. In their report summarizing research on professional development for the School Improvement Branch, Basic Learning, Alberta Education, the InPraxis Group (2006) stated, “According to a consistent consensus of expert opinion, any professional development program should be able to answer the ultimate question — ‘Does our professional development have a positive effect on student learning?’” (p. 35). The small district; however, struggled with making a connection between student achievement and effective professional development.

Teachers in the small district show no less concern for improving student achievement than do teachers in the large district; however, teachers in the small district tend to focus on their own learning needs as the basis of professional development activities and determinations of effectiveness. This subtle difference should not be lost. Elmore (2002) contended that given the imperative to positively impact student achievement, effective professional development “should be evaluated continuously and primarily on the basis of the effect it has on student achievement” (p. 8). Joyce and Showers (2002) agreed and indicated evaluation begins with focus on the desired student outcomes that predicated the need for staff development. While this literature addresses professional development evaluation, the point herein is the focus on student achievement.

Teachers in the small district are focused on the need to improve their professional practice. Further, these teachers believe this improvement is the basis of improving student achievement. What’s the problem you might now assert?

These teachers also insist that professional development is intended to improve their practice, not student achievement; here in the point. Teachers in the small district do not generally relate professional development to student achievement. This is most prevalent at the secondary. The secondary professional development model includes a *Teacher Needs* component that flows into other components to address teacher needs (i.e. *Inter District Training* and *Outside Conferences*). Conversely, the elementary professional development model includes a *Student Needs* component that flows into other components of the model similar to components on the secondary teachers' model. Survey data bolster this assertion with over half the small district teachers reporting they were not certain professional development impacted student achievement.

Teachers in both districts believe technology and curriculum alignment are important pieces of their professional development efforts to improve student achievement. Teachers in the small district believe their recent purchase and implementation of more computers positively impacts student achievement. These teachers indicate the use of technology in the classroom improves student engagement as well as teacher enthusiasm. The software product Microsoft PowerPoint™ is most often used as a means of presenting lessons and providing students with alternative ways to demonstrate their own learning in the form of presentations on subjects of interest. The teachers in the small district continue to seek additional training on the use of instructional technology and report increases in classroom use. Both professional development models in the small district have a component labeled *Technology*. Among those teachers surveyed, most teachers in

the small district also reported technology training as one of their most recent professional development training activities.

Commenting on professional development in the use of technology Rodriguez (2000) stated:

Whether technology should be used in schools is no longer the issue in education. Instead, the current emphasis is ensuring that technology is used effectively to create new opportunities for learning and to promote student achievement. Educational technology is not, and never will be, transformative on its own, however. It requires the assistance of educators who integrate technology into the curriculum, align it with student learning goals, and use it for engaged learning projects (section Issue).

Teachers in the large district clearly use technology and consider it important to their improvement efforts. This was evidenced in the survey of teachers. Those who responded indicated that technology related training was the most frequently cited professional development activity among all others reported. Nearly half of the teachers surveyed reported attending some type of technology training among their most recent professional development activities. No other professional development activity was reported more frequently by teachers in the large district.

Curriculum development and alignment efforts are ongoing in both districts. Both districts see curriculum alignment with state tested standards as an essential element for continued improvement of student achievement. Teachers in both districts meet frequently to discuss their classroom content to ensure all teachers are on the “same page” and that students are presented with the same materials in

preparation for local and state assessments of student learning. Teachers often discuss the presentation of content in terms of what worked and what needs to be improved. Many of these discussions are directly related to the earlier discussion on the collaborative practices in both districts. Again, the teachers in the large district have persons designated to coordinate their curriculum development and alignment processes; however, teachers in both districts are intimately involved in the day to day work of curriculum development and alignment activities. Teachers in both districts reported recent professional development activities specifically related to the content areas of communication arts and mathematics, both heavily emphasized on required state assessments. Additionally, teachers in both districts continually use student achievement data to analyze and adjust their adopted curriculum. Finally, both districts have curriculum as part of their professional development models. Specifically, the elementary professional development model in the small district lists *Curriculum* as a specific component of their professional development process. All other models have curriculum listed as an aspect of a larger component of the model.

A plethora of researcher findings indicate the value of these curricular efforts. In her summary of effective school practices, Cotton (1995) indicated one such practice was “collaborative curriculum planning and decision making, focusing on building continuity across grade levels and courses; teachers know where they fit in the curriculum” (2.1.2 section). Other pertinent findings from the literature related to work on curriculum also indicated the value to curriculum writing and alignment efforts as effective professional develop strategies. In her eighteen

strategies for professional learning, Loucks-Horsley (2003) indicated aligning and implementing curriculum, and the selection of instructional materials “as robust examples of professional development” (p. 12). Hiebert and associates (2002) shared the “growing consensus that professional development yields the best results when it is long-term, school-based, and collaborative, actively involving all teachers, focused on students’ learning, and linked to the curriculum”(p. 3).

Evaluation is an essential element of improved teaching and learning in Lakeside and Plainview. Teachers in both districts speak of evaluation and accountability, often times interchangeably. In the majority of instances, whether evaluation or accountability, teachers’ use of these terms is intended to communicate the need for improvement, based upon holding persons accountable through evaluation or evaluating professional development activities to determine if the intended outcome was achieved.

While teachers in both district believe teacher evaluation is a vital aspect of continuous improvement, teachers also believe evaluation has much broader implications. Teachers insist that district leadership evaluate them to ensure implementation of new learning. You will recall this discussion from an earlier conclusion. Another aspect of evaluation teachers point out is that of professional development activities as it specifically relates to the effectiveness of same. Again, this was part of an earlier discussion in another conclusion. Why then broach the topic of evaluation as its own conclusion.

Teachers in both districts recognize the need for improvement of their professional development processes as graphically represented in their respective

professional development process models. Teachers in both districts believe better tools to evaluate the effectiveness of their professional development activities should be ascertained and implemented as a means of improvement. Teachers also believe that evaluation of professional development should be ongoing to provide real time data on the needs of teachers. This, teachers believe, will have dramatic impacts on student achievement.

Again, the large district is in a better position to implement these improvements due to the existence of specific persons, with no teaching responsibilities, responsible for this improvement. The small district is no less concerned with the need to address this improvement; however, those most likely to research and develop an improved system of professional development evaluation are also tasked with other full time teaching or supervisor responsibilities.

The continuous acquisition of new learning and skills development are predicated on effective professional development that improves student achievement in Lakeside and Plainview. Teachers surveyed in both districts reported new knowledge and skills were the most highly perceived learning of professional development in Lakeside and Plainview. Teachers also reported high levels of satisfaction with their respective professional development. In the same survey, teachers in the small district also reported professional development was the most meaningful when they learned practical instructional strategies. Conversely, teachers in the large district frequently speak of their ongoing efforts to hone their knowledge and use of effective instructional strategies.

Teachers in both districts believe that effective instructional practices are founded in a solid research base. All teachers speak of the use of conferences to research and explore new teaching techniques and instructional strategies; however, this sentiment is more prevalent at the secondary level in both districts. The large district tends to rely more heavily on its own internal expertise with the availability of same which is specifically designated to research and train teachers in effective instructional practice. Teachers in the small district do the same; however, they do not have persons whose full time job it is to provide this training and research of new knowledge and skills. More often teachers in the small district rely on regional expertise through the state or surrounding districts.

Teachers in the large district more often take advantage of special training programs provided by the state. This is in large part due to the availability of resources that the small district does not have. Teachers in the large district have more release time to explore these opportunities, while those in the small district do not have as much release time provided by the district. Teachers in the small district; however, have the advantage of all staff members located in a single structure although they speak to the difficulty of finding time, based largely on proximity, to meet with other faculty members not teaching the same grade level or content area.

Another difference in the districts is their use of outside experts on-site. This is prevalent in the large district. They use multiple outside experts through ongoing efforts to work with various teachers and groups of teachers on specific instructional strategies. Teachers in the small district did not speak of any ongoing

or recent use of outside professionals to work with individual teachers or groups of teachers to improve their knowledge and skills. A final point on effective instructional practice highlighted the comprehensive nature of teaching. Darling-Hammond (1997a) indicated the lessons learned with any effort to improve teaching and learning were decidedly “effective or ineffective by the knowledge, skills, and commitments of those in schools” (p. 7).

Summary of Conclusions

I close the conclusion section with the offer of a new process model for improved student achievement based upon a synthesis of the findings and conclusions (see figure 1). The four components of my model are (a) professional development, (b) teachers, (c) a guaranteed and viable curriculum delivered through the appropriate use of effective instructional practices, and (d) student achievement. In my model professional development may take many forms. Each of the components; however, are most strengthened by professional development in the form of collaborative processes, both formal and informal, all of which are focused on student achievement as measured by teacher observation, formative assessment, or summative assessment.

In my quest to identify the component or components of each district’s professional development model that most contributed to improved student achievement I identified the foundation of their respective efforts. Each district’s professional development efforts were based upon a guaranteed and viable curriculum delivered through the appropriate use of effective instructional practice. This guaranteed and viable curriculum simply means that the written, taught, and

tested curriculums align. Finally, each of the four process model components is supported by (a) leadership, (b) accountability, (c) resources, and (d) knowledge.

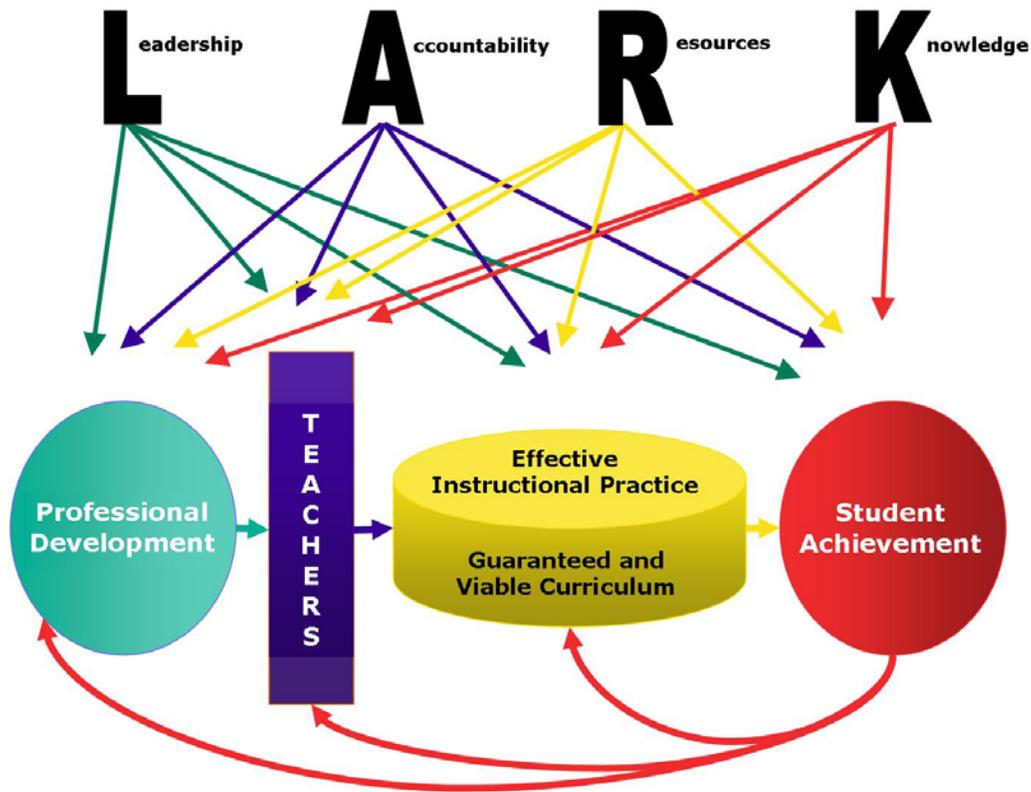


Figure 1. Improvement Process Model

The role of leadership, whether teachers or administrators, is to provide the needed support and focus on each component of the process model intended to improve student achievement. Accountability is brought into the model through collaborative efforts, teacher observation, and the review and analysis of student achievement data. Resources include the availability of time and money with an emphasis on time, particularly related to providing teachers time for collaboration as an effective form of professional development. The final support of knowledge

indicates the need for expertise in such areas as professional learning communities, curriculum design and alignment, effective instructional practice, and data analysis. The emphasis here is expertise, not a general knowledge.

The final aspect of this process model is the left to right flow from professional development through the filter of teachers whose continuous improvement efforts based upon their pedagogy and curriculum alignment efforts result in improved student achievement. However, you should also note that a continuous cycle is indicated by the arrows that return to each of the prior components from student achievement. This is to indicate that as a result of an analysis of student achievement data; continuous improvement is achieved based upon improvements in the implementation of one or more of the prior components.

Implications

I conclude with the study implications and implications for further research. Both are intended to provide suggestions for other researchers, district and school leaders, teachers, and interested educators who find the study products generalizable to their own setting, perhaps of benefit in their own improvement efforts, or as the impetus for their own research in the field of professional development. Emerging from a synthesis of the study research literature, findings, and conclusions, implications herein set forth are based upon an assumption that asserts one of the products of effective professional development is improved student achievement. These implications are intended to provoke additional discussion, research, and understanding of the processes most likely to improve professional development that results in increased student achievement.

School districts that promote student-focused collaborative processes may improve effective professional development that increases student achievement.

Teachers and researchers affirm improvements in teaching and learning based upon collaborative processes (Corcoran *et al.*, 2003; Guskey, 2003a; Kelleher, 2003).

Districts may benefit from a review of the processes and structures in place to support teacher opportunities to collaborate. Collaborative efforts are more productive when focused on student needs and guided by predetermined goals.

Teachers indicated a high degree of satisfaction from those opportunities to collaborate that were intentional about the goals to be achieved in their time together. Moreover, researchers assert the need to focus on student achievement as the basis of professional development efforts including collaboration (Sparks, 1994).

Teachers described effective collaboration as those that were focused on opportunities to review student work; investigate student strengths and weakness; determine instructional strategies most effective, based upon student achievement data; and discuss problems, based upon student achievement data, associated with initial attempts to implement new learning and skills. Teachers often times credited the efforts of district and building leadership for bringing focus to their collaborative process.

Effective leadership that provides support for and a focus on student-centered professional development activities may improve student achievement. Teaching and learning improve in part based upon the focus leadership brings to the professional development activities of teachers (Killion *et al.*, 1999). Teachers clearly indicate the need and desire to have a voice in their own professional development; however,

they acknowledge the need for support and encouragement from leadership.

District and site leadership can impact the effectiveness of professional development processes intended to improve student achievement by keeping the focus of professional development planning, implementation, and follow-up activities on student achievement, through careful data analysis of student achievement, resulting in improvement goals, that drive discussions and decisions about teacher professional development (Cotton, 1995). One aspect of support and focus leadership may guide involves the curriculum improvement process.

A continuous cycle of curriculum review and adjustment may provide opportunities for quality professional development that improves student achievement. Teachers report student achievement gains can be achieved through a careful analysis of the written and taught curriculum of the district. Teachers highlight the imperative to verify that the taught curriculum matches the written curriculum, which has been carefully aligned to the stakeholder consensus of high standards for student knowledge and skills. The initial focus of is typically on communication arts and mathematics curriculum that are annually tested as part of the stated required student assessments.

The importance of a continuous process of review and adjustments to district curriculum is predicated on the needs of students based upon a careful and ongoing analysis of student achievement. Teachers understand the necessity of the entire staff “being on the same page” as it relates to the implementation of the written curriculum. These efforts provide teachers with rich opportunities for professional development in the form of collaborative planning, observation of other teachers’

use of effective instructional practices, reviewing student achievement data, and acquiring new knowledge and skills needed to correctly implement new curriculum and accompanying resources. Researchers concur with the need to assure all teachers have the same expectations for what students should know and be able to do (Schmoker, 2006). The establishment of a processes and structures that support the continuous review of and adjustments to district curriculum necessitates ongoing and sustained support for the appropriate use of effective instructional practices.

Teachers' uses of effective instructional practices that improve student achievement could be enhanced through a process of continuous review and ongoing professional development. Researchers have clearly established the necessity for ongoing and sustained professional development intended to result in teacher acquisition and implementation of effective instructional practice (Darling-Hammond & Ball, 1997; Marzano et al., 2001). Continuous review of professional development is best described by a teacher who adds, "You don't know whether teachers are implementing the professional development unless you do an evaluation of individual teachers."

An expectation of appropriate implementation of effective instructional practices is supported by teachers. Teachers acknowledge their colleagues potential for push-back; however, they also understand the accountability in terms of an allocation of resources intended to improve teaching and learning. Leadership should, "Work to establish a norm of collegiality; communicate the expectation that

staff members will routinely share ideas and work together to improve the instructional program” (Cotton, 1995, 2.3.4 section).

Implications for Further Research

The research base on professional development is enormous as established in the literature review. That being said, what then might I suggest as a result of this study? While the study took place in a given context, findings and conclusions from the study were supported in the literature base. One aspect of the research literature on professional development indicates the difficulty of evaluating professional development in terms of student achievement (Guskey, 2000).

Teachers in this study indicated the need to strengthen their own evaluation of professional development processes. Teachers also recognized the value of professional development and indicated the use of specific tools to measure the implementation of effective instructional practice previously introduced and supported through ongoing training as part of their respective professional development activities. What then might further study offer to aid educators in their efforts to improve professional development processes through evaluation?

As part of this study I also detailed a robust model for the selection of study sites based upon the variables of (1) district size based upon student enrollment, (2) the need to identify school districts with consistently high student achievement in all grades and subject areas tested over multiple years, (3) districts with a high rate of student poverty, and (4) average or below levels spending per student. An extension of this model might include the identification of a number of districts that

present the best combination of variables similar to the site selection methodology used in this study.

The researcher might then administer an appropriate advanced survey to ascertain the beliefs and perceptions of key district staff, familiar with their respective professional development, regarding how determinations of professional development effectiveness are made. Using these two methods in combination researchers might then select multiple sites for further investigation with the purpose of detailing effective professional development evaluation processes based in part on student achievement. Missouri districts and school districts in general could benefit from an examination and explication of effective professional development evaluation techniques based in part on student achievement as found in various contexts, perhaps similar to their own.

Another implication for further study may also relate to collaboration. Teachers indicated they perceive considerable benefit derived from collaborative efforts to improve teaching and learning. Researchers also support the value of collaboration that improves the teaching and learning process (Kelleher, 2003). Teachers shared a number of collaborative efforts including professional learning communities and learning teams that have a supporting researcher base (Hord, 1997b). Teachers also discussed collaboration discussed in terms of faculty meetings, grade level meetings, or content area meetings. However, teachers did not report structures and processes to determine the effectiveness of what they communicated and perceived to be less formal meetings.

Based upon a site selection process similar to the methodology outlined for this study, valuable insight may be offered to educators about the specific processes and structures various districts bring to these less formal meetings that result in improvements in student achievement. An outline of various processes and structures put in place at selected districts may shed light on the potential for improving these same process and structures in other districts in a similar context and who desire to bring focus and alignment to their improvement efforts.

I now acquiesce to your own reflections on the products of the study. May your own improvement efforts be enlightened or confirmed by our time together.

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APPENDICES

Appendix A

Site Selection Process Based on Student Achievement

Table A1

Example District Percentage of Advanced and Proficient

District	10th Grade Math				
	2001	2002	2003	2004	2005
A	27.1	20.2	25.0	22.5	31.3
B	40.8	40.6	32.5	35.1	42
C	14.1	17.2	27.9	31.4	38.5
D	22.5	15.9	23.6	32.1	27.5
E	18.7	13.7	18.5	16.3	15.5
F	20	14	13.4	21.1	27.4
G	23.9	23	22.9	29.2	28.8

Table A2

Example Districts Percentile Scores Based on Percentage of Advanced and Proficient

District	10th Grade Math Percentile Scores				
	2001	2002	2003	2004	2005
A	98.614347	93.507394	97.080520	87.848736	96.821858
B	99.997039	99.999373	99.812299	99.613792	99.884343
C	68.419792	86.326466	98.874060	98.694143	99.605821
D	94.431360	81.945412	95.591154	98.948933	92.393829
E	86.186610	72.760794	84.647882	66.680813	53.814773
F	89.633245	74.136277	63.224365	84.163195	92.233223
G	96.225563	97.169394	94.643847	97.518754	94.258353

Table A3

Example District Ranking Based on Percentile Scores

10th Grade Math Rank Order					
District	2001	2002	2003	2004	2005
A	2	3	3	5	3
B	1	1	1	1	1
C	7	4	2	3	2
D	4	5	4	2	5
E	6	7	6	7	7
F	5	6	7	6	6
G	3	2	5	4	4

Table A4

Example District Ranking Based on Percentile Scores

District	Communication Arts				^a Total
	3rd	7th	11th	Average	Average
A	18	6	15	13	11.7
B	22	16	5	14.3	19.7
C	19	4	21	14.7	13.3
D	21	13	10	14.7	43.8
E	45	7	17	23	52.5
F	58	14	14	28.7	79.3
G	62	1	32	31.7	34.7

^aTotal average for communication arts and mathematics in all grades for all years.

Table A5

Example District Ranking Based on Percentile Scores

District	Mathematics				^a Total
	4th	8th	10th	Average	Average
A	5	6	20	10.3	11.7
B	46	20	9	25	19.7
C	27	5	4	12	13.3
D	12	129	78	73	43.8
E	16	53	177	82	52.5
F	106	170	114	130	79.3
G	78	16	19	37.7	34.7

^aTotal average for communication arts and mathematics in all grades for all years.

Appendix B

Memorandum of Agreement

WSU Letterhead

January XX, 2007

Dear Superintendent:

RE: MEMORANDUM OF AGREEMENT TO PARTICIPATE IN RESEARCH STUDY

Thank you again, for your support of my research by allowing [District Name] to participate in a study of professional development models that impact student achievement. I hope to learn which aspects of your implemented professional development model teachers believe significantly impact student achievement.

[District Name] is only one of two K-12 Missouri public school districts selected to participate in this study. [District Name] was selected to participant in this study based upon demonstrated and consistently high student achievement as compared to all other K-12 Missouri public school districts.

As part of this study the following activities will occur:

1. All certified teachers will be invited to participate in an online professional development survey. Each participant should be able to complete the survey in less than 15 minutes. This survey is completely anonymous, only asking participants for basic demographic data such as years of teaching experience and grade level assignment.
2. A list of pertinent documents required by the DESE as well as other documents related to district professional development will be collected. From these documents details regarding the organizational design of effective professional development in may be extrapolated. Essential documents would include, but not be limited to, the district professional development plan, individual school improvement plans, a sampling of teacher individual development plans, past professional development activity agendas, and evaluations of professional development activities if available. Searches may continue for other documentation revealing the models of effective professional development currently used in [District Name]. District leadership agrees to provide the researcher with a contact person who will assist with the collection of these documents.

3. Two focus group(s) will be organized to outline and discuss various aspects of [District Name]'s professional development model. The focus group will include 6 to 12 certified teachers. The focus group process will begin with a hands-on facilitated activity designed to assist participants with the development of a process flow chart that graphically represents the professional development model of [District Name]. It is anticipated this hands-on activity will take approximately 60 minutes. Following the development of a process flow chart, participants will be asked to collectively and/or individually respond to a series of questions asked by a moderator. This guided discussion should last approximately 30 minutes. A mutually agreeable time and location for this focus group will be arranged to accommodate, as much as possible, participant schedules. [District Name] leadership will assist the researcher in securing an appropriate location and time for each focus group.
4. Based upon the recommendations of focus group participants and district administrators, the researcher will personally interview 4 to 6 individuals in [District Name]. A set of open-ended questions will be asked of each participant to provide a structure to guide the interview. These questions will seek information regarding perceptions held by individual participants about [District Name]'s professional development and the organizational design of [District Name]'s professional development activities. This guided discussion should last approximately 45 minutes. The researcher will coordinate a mutually agreeable time and location for the interview with each individual participant.

Benefits to participants and [District Name] include a deeper understanding of your professional development process as this study attempts to identify for [District Name] those components of your implemented professional development model that may significantly impact student achievement. Your district will receive a copy of the dissertation which is the final report. Additionally, other districts similar to [District Name] may benefit through a better understanding of those aspects from your professional development model that translates to improved student achievement.

Any information obtained in this study in which an individual participant can be identified will remain confidential and will be disclosed only with participant permission. The findings, conclusions, and recommendations resulting from this study may be published in one or more professional journals; however, no personally identifiable information will be used nor will the specific name and/or location of [District Name] be referenced without district permission.

If you have any questions about this research, please contact:

Chuck Stockton
3925 W Randall
Battlefield, MO 65619
cstockton@spsmail.org
WK (417) 523-0014
HM (417) 886-4704
FAX (417) 523-0187

OR

Dr. Randall L Turk
Wichita State University
104L Hubbard Hall
randy.turk@wichita.edu
Wichita, KS 67260
WK (316) 978-6337
HM (316) 686-1632

If you have questions pertaining to your rights as a subject, or about research-related injury, you can contact the Office of Research Administration at Wichita State University, Wichita, KS 67260-0007, or telephone (316) 978-3285.

Your signature indicates that you have read the information provided above and have voluntarily decided that [District Name] will participate.

Superintendent Signature

Date



January 2, 2007

Chuck Stockton, Researcher

Date

Appendix C

Letter Requesting Participant to Complete Professional Development Survey

WSU Letterhead

January XX, 2007

Name of District

Address

City, ST Zip

Dear Educator

DOCTORAL STUDENT REQUESTS YOUR ASSISTANCE AND COMPLETION OF AN ONLINE SURVEY @ (URL)

My name is Chuck Stockton, I am a Wichita State University, Wichita, KS, doctoral candidate requesting your cooperation in the completion of an online survey about (District Name)'s professional development. All certified teachers in (District Name) have been asked to do the same. Your participation is completely voluntary. This is a completely anonymous survey and confidentiality will be assured. Data collection is limited to demographic information about you and your perceptions of (District Name)'s professional development model. Most persons are able to complete this survey in 10 – 15 minutes. Please click on the link in the subject line above to begin this survey from any computer connected to the internet. This survey will not be accessible after January XX, 2007.

(District Name) was selected for this study based upon high student achievement in both communication arts and mathematics as measured by the MAP test during the period 2001 through 2005. This study has been approved and complies with federal regulations regarding the review and approval of research involving human subjects conducted by faculty, staff and students of Wichita State University, Wichita, KS.

The intent of this study is identifying those components of the implemented professional development model of (District Name), that you believe significantly impact student achievement. My dissertation proposal is titled *Professional Development Model Components that Positively Impact Student Achievement: Perceptions of Teachers in Two High Performing, Low SES Missouri School Districts*.

The following research questions will guide this study:

1. What do teachers in a large high performing, low SES district identify as the critical components of their professional development model for student success?
2. What do teachers in a small high performing, low SES district identify as the critical components of their professional development model for student success?

Thank you in advance for your consideration and willingness to assist me with the collection of data for (District Name)'s professional development model.

Chuck Stockton, Doctoral Candidate
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NOTE: For your review, a copy of the study proposal is available in your building office. April 2007 is the anticipated completion of this study and dissertation defense. Upon final approval, a copy of the dissertation will be made available to (District Name) for your review.

Appendix D

National Staff Development Council Survey Use Permission Letter



Director of Publications
Joan Richardson
1128 Nottingham Road
Grosse Pointe Park, MI 48230
(313) 824-5004
Fax (313) 824-5002
joan.richardson@nsdc.org

Nov. 10, 2006

Chuck Stockton
Springfield Public Schools
Fax: 417-523-0187

Chuck,

The National Staff Development Council is pleased to grant you permission to use the Professional Development Questionnaire from "Evaluating the impact of professional development," by Christine Lowden, *Journal of Research in Professional Learning*, 2005, in conjunction with your doctoral work at Wichita State University.

Please ensure that this credit line appears on the first page of each copy:

Used with permission of the National Staff Development Council, www.nsd.org, 2006. All rights reserved.

Thank you for your interest in the Council's work and best wishes for successful completion of your graduate work.

Sincerely,

A handwritten signature in cursive script that reads 'Joan Richardson'. Below the signature, the name 'Joan Richardson' is printed in a simple, sans-serif font.

Appendix E

Professional Development Survey Instrument

Used with permission of the National Staff Development Council,
www.nsd.org, 2006. All rights reserved.

SECTION 1

Please tell me about yourself:

Total Number of Years Teaching Experience (including this year)

1-3 4 – 9 10-14 15-19 20-24 25-29 30 +

Total Number of Years Teaching in this school district (including this year)

1-3 4 – 9 10-14 15-19 20-24 25-29 30 +

Grade level Currently Teaching: (check all that apply)

Pre-K-2 3-5 6-8 9-12

Subject or Content Area: _____

Professional Development Process

1. I am aware of the goals of my district's Professional Development Plan.
 Yes
 No

2. My district's Professional Development Plan is linked to overall school improvement and increased student achievement.
 Yes
 No
 Not sure

3. My district's professional development plan is related to the teacher evaluation process.
 Yes
 No
 Not sure

4. Professional development in my district is offered: (check all that apply)
 During the school day
 Before and/or after school
 On conference days
 At the end of the school year (the week after school closes)
 At the beginning of the school year (end of August or early Sept.)
 During the summer
 On my lunch hour
 On weekends
 In the evenings
 Online
 Other _____

5. In which types of professional development activities have you participated? (check all that apply)

Individually guided staff development

- Individual Professional Development Plan - learning is designed by the teacher, teacher determines his or her own goals and chooses the activities that will help accomplish the goals
- Individual Professional Improvement Plan - teacher has been advised that he/she has a weakness in particular area(s) and exercises an improvement plan in conjunction with an administrator or support person
- Guided practice - teacher meets with "experts" to learn new skills, instructional strategies and receives in-class guidance
- Reflection about teaching and learning

Observation/Assessment

- Classroom observation and assessment - evaluation by administrators (formal feedback)
- Classroom observation by a fellow teacher - peer coaching
- Mentoring - engaged in formal mentor program with trained mentor

Involvement in a Development/Improvement Process

- Curriculum Development Days - teachers learn as a result of being involved in the development, design and/or improvement of curriculum
- School Improvement Committees - teachers learn through participation on committees such as strategic planning or Comprehensive District Education Plan (CDEP)

Training

- Presentations or Demonstrations (1/2 day or 1 day)
- Workshops or seminars (1/2 day or 1 day)
- Conferences
- Expert Lectures or Motivational Speeches

Inquiry

- Peer study groups – teachers meet to discuss current research in education
- Inquiry/Action Research - teachers formulate questions, gather and analyze data and use their findings to advance instruction

Courses

- Graduate courses
- Long-term courses within the District - (8-10 sessions or more) with in-class support. Follow-up, feedback and support in the classroom is provided to improve implementation of new instructional strategies
- Long-term courses within the District (8-10 sessions or more) without in-class support, feedback or follow-up
- Continuing Education or Adult Education Course (not for credit)
- Teacher Center Courses
- Boces Courses

List any other types of professional development experiences you have had that are not mentioned on the previous page

Professional Development Content

6. Who decides the content of professional development in your district?
- District Level Administrators
 - Building/School Level Administrators
 - Grade Level or Department Chairperson
 - Professional Development Committee
 - Teachers
 - Combination
 - Other _____
7. Please list the topics of the last 3 professional development opportunities offered to you by your school district in which you participated: (ie: technology, learning styles, brain research, differentiation)
1. _____
 2. _____
 3. _____

SECTION 2

Statement: Professional development in my school district:	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
8. Meets my needs					
9. Is nonthreatening					
10. Is offered at a time convenient for me					
11. Is time well-spent					
12. Is offered by instructors who are knowledgeable and effective					
13. Is generally a positive experience					

Statement: Because of professional development, I have learned:	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
14. Practical instructional strategies					
15. New knowledge and skills					
16. The theory behind the practice					
17. New concepts connected to prior knowledge					

Statement: Professional development in my school district:	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
18. Has a positive impact on the organization as a whole					
19. Has a positive impact on the culture and climate in my school					
20. Is often conducted during the school day					
21. Leads to in-service credit or a stipend					
22. Is recognized as being extremely important by the following:					
Board of Education					
District Administrators					
Building Administrators					
My Colleagues					
Myself					
Parents					

Statement : After I have participated in a professional development experience, I usually:	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
23. Go back and experiment or practice with new instructional strategies					
24. Implement/apply new instructional practices					
25. Become committed to new teaching strategies					
26. Note positive changes in my teaching					
27. Make long-lasting changes in my teaching					

Statement: Generally, my professional development impacts my students in the following ways:	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
28. It makes a positive impact on my students' learning					
29. Student achievement increases					
30. Students are more engaged in learning					
31. Students are involved in their own learning					
32. Classroom management has improved					
33. Student achievement has risen on state or district assessments					
34. Student achievement has risen on teacher or classroom assessments					
35. Students' confidence as learners has improved					

Statement: As a result of professional development, my attitudes and beliefs about teaching and learning change when:	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
36. The experience was meaningful to me					
37. I learned practical instructional strategies					
38. My teaching becomes more effective					
39. I am more efficient or productive as a teacher					
40. I've enjoyed the experience					
41. I become empowered in new ways					
42. I have learned to meet the various needs of all of my students					
43. It has a positive impact on student behavior					
44. My students become more actively engaged in learning					
45. I can see a positive impact on student achievement					
46. It impacts my annual performance evaluations positively					
47. I receive positive feedback from my supervisor					
48. My efforts are recognized					
49. I feel proud of my accomplishments					
50. It connects to district needs and overall school improvement					

Appendix F

Focus Group Interview Protocol

Adapted from the dissertation by D. Keith Gurley, Wichita State University, (2000)
Perceptions, Behaviors, and Organizational Structures that Foster Professional Learning Community in Kansas Public Elementary Schools

First, I want to thank you for attending this focus group today and for agreeing to participate in my research project. The focus of my research is professional development. More specifically; however, I am exploring the link between professional development and student achievement. I am particularly interested in understanding (District Name)'s professional development model and the components that define it or perhaps graphically represent it. My interest is in discovering what it is that a high achieving district's professional development model is that results in improved student achievement.

(District Name) has been selected for participation in this study because you have met the following criteria. (District Name) was selected because your students have demonstrated consistently high or significantly improving achievement scores in communication arts and mathematics over a 5 year period (2001- 2005) on the Missouri MAP. Each of you individually was selected to participate in this focus group based upon the recommendations of your district leadership team. The staff and you as representatives of (District Name) are to be commended for your exceptional performance.

Today, I am here to listen to you and to observe you in action as you explain the design of your professional development model and how it impacts student achievement. I am interested in learning about the perceptions you hold about professional development and instruction in (District Name). I am also interested in hearing from you about the behaviors of people in (District Name), either your behaviors, or the behaviors of others in (District Name), that you believe contribute to the quality of your professional development.

I would like to begin with an activity designed to lead you through the development of a consensus model of your professional development followed by a series of questions to discuss (District's Name) professional development model. I will facilitate the activity and ask the questions, allowing you to respond to them. The rules are simple, that only one person speaks at a time and that all who wish to respond be allowed to do so. You may converse with each other regarding the topic, or respond to something that someone else says during the discussion. Please feel free to speak openly about any of the subject matter.

Your discussion during the activity and your answers to the questions following are being tape-recorded so that I may study this session in detail later. I may use either the general meaning of your answers or even your direct quotes in my research report. At no time will any person's comments be identifiable or traceable back to an individual. The confidentiality of your remarks will be maintained at all times.

- Question 1. Let's start by brainstorming and naming the various components of your professional development model. Call out each component so that other members of the group can hear you and write your component on a sticky note. Sticky notes have been provided for each of you. Place your sticky note on the poster board at the center of the table that all may see it. Please write as neatly as possible that I may be able to read your notes at a later date. Please write one component per sticky note.
- Question 2. As a group and based upon the consensus of the group, organize the sticky notes into categories or big ideas that might represent the various processes of your professional development model. Give each process comprised of the various components a name that is descriptive of the process and others will understand.
- Question 3. Organize each of the processes into a model that might represent the flow of your professional development model. Draw arrows and identify responsible parties at each decision point to clarify your professional development model.
- Question 4. How accurately does this graphical representation express the professional development model and processes of (District Name)?
- Please explain why you believe as you do.
- Question 5. Which if any, of the components depicted in this graphical representation most influence improved student achievement?
- Please explain why you believe as you do.
- Question 6. How might the model be changed to increase student achievement.
- Question 7. What else would you like to share that might help me better understand your professional development model and its impact on student achievement.

Question 8 What person or persons would you recommend I interview personally for me to gain a better understanding of (District Name)'s professional development model and it' influence on student achievement?

Appendix G

Individual Interview Protocol

Adapted from the dissertation by D. Keith Gurley, Wichita State University, (2000)
Perceptions, Behaviors, and Organizational Structures that Foster Professional
Learning Community in Kansas Public Elementary Schools

Thank you for agreeing to participate in this interview and for helping me gather the information I need for my research project.

As you are aware, I am conducting research to explore how the components of (District Name)'s professional development model impact student achievement. (District Name) was selected because your students have demonstrated consistently high or significantly improving achievement scores in communication arts and mathematics over a 5 year period (2001 – 2005) on the Missouri MAP. You were selected as an expert of the district professional development model based upon the recommendations of the district leadership and your peers. The staff and you as representatives of (District Name) are to be commended for your exceptional performance.

During this interview I am interested in learning from you about the design of your professional development model and how it impacts student achievement. I am interested in learning about the perceptions you hold about professional development and instruction in (District Name). I am also interested in hearing from you about the behaviors of people in (District Name), either your behaviors, or the behaviors of others in (District Name), that you believe contribute to the quality of your professional development and high student achievement. I may use either the general meaning of your answers or even your direct quotes in my research report. The confidentiality of your remarks will be maintained at all times. With your permission I would like to tape this interview for further study at a later day.

Question 1. First, please tell me about yourself, and your responsibilities related to district professional development.

- Probes: What is your job title?
How long have you been in education?
How long have you been in the District?
How long have you been in your current position?
What are your current job responsibilities?

Beliefs and Perceptions:

Question 2. Tell me what you believe constitutes effective professional development?

Probe What aspect of effective professional development do you believe is most important to the implementation of effective instructional practice?

Question 3. Why do you believe (District Name) continues to show such a remarkable trend in student performance?

Behaviors:

Question 4. Talk to me about some of the things that you and the other educators in this District do, either regularly or occasionally, that improve student achievement.

Question 5. How is it determined whether or not professional development is effective?

Probe: How is it determined whether or not professional development results in improved student achievement?

Question 6. How does district leadership contribute to and support professional development that improves student achievement.

Organizational Structures:

Question 7. What professional development processes are at work in (District Name) to encourage increased student achievement?

Probes: Work Schedules
 Calendar
 Meetings
 Planning
 Follow-up
 Coaching
 Monitoring
 Which of these activities you just mentioned most impacted student improvement?

Question 8. Talk to me about the support you receive from outside the District that impacts student achievement?

Question 9. What else would you like to share with me about (District Name)'s professional development model that results in increased student achievement.

Appendix H

Participant Transcript Member Check Email

Dear Educator

Thank you again for your recent participation in my doctoral dissertation study of Professional Development. Please find attached for your review, a copy of the transcript from your [personal or focus group] interview. The transcript is verbatim and I will not include the "uhs" and "ums" in any quotes I might use for my paper. Please read it over and let me know if there are any inaccuracies in the transcription from the tape reordered interview. If you wish to make any corrections please do so in a manner that will allow me to clearly identify what you have changed in the electronic document and attach same in a reply to this email. I would appreciate your feedback by weeks end, March 16th.

You will recall that any information obtained in this study in which you can be identified will remain confidential and will be disclosed only with your permission. The findings, conclusions, and recommendations resulting from this study may be published in one or more professional journals; however, no personally identifiable information will be used. I also plan to give you and others who participated an additional opportunity to check my work as it relates to my findings and conclusions of the [District Name] professional development model, prior to submission of my dissertation to my committee.

Thanks again for your participation in my research. The input from you and other participants and the accuracy of that input are vital to my research.

Chuck Stockton

Wichita State University, Wichita, KS
Doctorial Candidate
Springfield, MO
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Appendix I

Participant Findings and Conclusions Member Check Email

Dear Educator

Thank you again for your recent participation in my doctoral dissertation study of Professional Development. Please find attached for your review, the section of my dissertation specific to [District Name]. Please read it over and let me know if there are any inaccuracies or misrepresentations of [District Name] related to my study. If you wish to make any corrections please do so in a manner that will allow me to clearly identify what you have changed in the electronic document and attach same in a reply to this email. I would appreciate your feedback by weeks end, April 6th.

You will recall that any information obtained in this study in which you can be identified will remain confidential and will be disclosed only with your permission. The findings, conclusions, and recommendations resulting from this study may be published in one or more professional journals; however, no personally identifiable information will be used.

Pending final approval of my dissertation I plan to share an electronic copy with your superintendent for distribution among those interested in [District Name]. Thanks again for your participation in my research. The input from you and other participants were invaluable to the success of my study and other in the state of Missouri who might benefit as well.

Chuck Stockton

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Appendix J

Lakeside R-I Achievement and Survey Results

Table J1

Top 25 Achieving Small K-12 Districts for the Years 2001 through 2005

District	Communication Arts			Overall Rank		
	3rd	7th	11th	CA	MA	Total
A	18	6	15	1	2	1
B	19	4	21	3	3	2
C	22	16	5	2	6	3
D	8	100	1	9	4	4
E	62	1	32	7	12	5
F	93	40	44	25	5	6
G	40	5	73	10	13	7
H	7	32	183	35	1	8
I	21	13	10	4	39	9
J	5	80	76	18	15	10
K	78	30	19	12	22	11
L	83	29	24	14	23	12
M	122	104	7	42	7	13
N	45	7	17	5	47	14
Lakeside	150	36	2	27	16	15
O	15	182	34	41	8	16
P	201	22	3	37	14	17

District	Communication Arts			Overall Rank		
	3rd	7th	11th	CA	MA	Total
Q	61	3	61	11	42	18
R	124	38	4	22	27	19
S	9	74	25	8	51	20
T	6	28	97	13	52	21
U	57	20	116	29	33	22
V	98	15	82	31	35	23
W	84	46	51	26	40	24
X	11	77	74	20	48	25

Table J2

Top 25 Achieving Small K-12 Districts for the Years 2001 through 2005

District	Mathematics			Overall Rank		
	4th	8th	10th	CA	MA	Total
A	5	6	20	1	2	1
B	27	5	4	3	3	2
C	46	20	9	2	6	3
D	21	18	1	9	4	4
E	78	16	19	7	12	5
F	14	4	31	25	5	6
G	83	26	6	10	13	7
H	13	12	5	35	1	8
I	12	129	78	4	39	9
J	45	52	21	18	15	10
K	29	11	126	12	22	11
L	62	33	83	14	23	12
M	8	29	45	42	7	13
N	16	53	177	5	47	14
Lakeside	34	45	49	27	16	15

District	Mathematics			Overall Rank		
	4th	8th	10th	CA	MA	Total
O	1	65	24	41	8	16
P	69	8	40	37	14	17
Q	35	37	157	11	42	18
R	66	1	122	22	27	19
S	6	128	129	8	51	20
T	126	43	95	13	52	21
U	54	89	61	29	33	22
V	117	60	29	31	35	23
W	43	66	112	26	40	24
X	28	81	144	20	48	25

Table J3

Top 25 Achieving Small K-12 Districts Ranked by Average Expenditures per ADA

District	Achievement		Average		
	Rank	Expenditures	Enrollment	SES %	
F	6	5205	1887.8	20.76	
Lakeside	15	5472	769.4	40.68	
U	22	5551	1328.8	24.82	
T	21	5610	677.6	26.48	
B	2	5736	221.2	18.60	
W	24	5796	1444	44.82	
K	11	5825	804	53.42	
C	3	5851	1129.8	25.10	
I	9	6206	1257	16.48	
S	20	6397	294.4	58.56	
M	14	6790	1653	45.40	
L	12	6819	788.6	39.42	
R	19	6862	263.4	48.28	
V	23	6991	476.4	27.16	
E	5	6996	684.8	19.60	

District	Achievement	Average		
	Rank	Expense	Enrollment	SES %
P	17	7110	259.2	34.72
A	1	7119	260.6	25.08
N	13	7336	286.6	43.86
G	7	7584	1320.8	24.08
Q	18	8094	239.6	40.00
J	10	8195	938.4	31.22
H	8	8272	351.4	30.86
X	25	8482	1249.6	31.34
O	16	9501	156.8	38.62
D	4	12424	879.4	22.42

Table J4

Lakeside R-I Demographic Data of Survey Respondents

		Frequency (N=43)	Percent of Respondents
Years Teaching Experience	1-3	4	9.30
	4-9	7	16.30
	10-14	12	27.90
	15-19	6	14.00
	20-24	4	9.30
	25-29	4	9.30
	30+	6	14.00
	Years in District	1-3	8
4-9		11	25.60
10-14		12	27.90
15-19		3	7.00
20-24		3	7.00
25-29		3	7.00
30+		3	7.00
^a Grade Level		Primary (K-2)	12
	Elementary (3-5)	14	32.60
	Middle (6-8)	17	39.50
	High School (9-12)	17	39.50

^aTotals do not sum to 100% because respondents could choose more than one option.

Table J5

Frequency Data for Lakeside R-I Professional Development Plan and Goals

		Frequency (N=42)	Percent of Respondents
Aware of Professional Development Plan	Yes	39	92.90
Goals	No	3	7.10
	Yes	38	90.50
Professional Development Plan linked to Student Achievement	No	0	0.00
	Not Sure	4	9.50
	Yes	23	54.80
Professional Development Plan linked to Teacher Evaluation	No	5	11.90
	Not Sure	14	33.30

Table J6

Frequency Data for Professional Development Designs Participated in by Lakeside R-I Teachers

	Frequency (N=43)	Percent of Respondents
Conference days	29	67.40
Before/after school	15	34.90
During the day	32	74.40
Full days during summer	4	9.30
Beginning of school year	31	72.10
End of school year	6	14.00
Weekends	2	4.70
Evenings	1	2.30
Online	6	14.00
Lunch Hour	0	0.00

Note. Totals do not add to 100% because respondents could choose more than one option.

Table J7

Frequency Data for Professional Development Format Participated in by Respondents

	Frequency (N=43)	Percent of Respondents
Individually guided staff development		
Professional Development Plan	25	58.10
Professional Improvement Plan	9	20.90
Guided Practice	21	48.80
Reflection	14	32.60
Observation and assessment		
Classroom observation and assessment by administrator	39	90.70
Classroom observation by fellow teacher	10	23.30
Mentoring	18	41.90
Involvement in a development/improvement process		
Curriculum development days	37	86.00
School improvement committees	16	37.20
Training		
Presentations or demonstrations	37	86.00
Workshops or seminars	36	83.70
Conferences	33	76.70
Expert lectures or motivational speeches	35	81.40

	Frequency (N=43)	Percent of Respondents
<hr/>		
Inquiry		
Peer study groups	13	30.20
Inquiry/action research	10	23.30
Courses		
Graduate courses	24	55.80
Long-term courses within the district, with in-class support	3	7.00
Long-term courses within the district, without in-class support	1	2.30
Continuing education or adult education courses	7	16.30
Teacher center courses	1	2.30
Other	2	4.70
<hr/>		

Note. Totals do not add to 100% because respondents could choose more than one option.

Table J8

Lakeside R-I Frequency Data Related to Professional Development Content

	Frequency (N=40)	Percent of Respondents
ABA training - off site	1	2.5
Behavior Management	1	2.5
Coping Skill	1	2.5
Curriculum Work	30	75.0
Instructional Practice	12	30.0
MAP Work	6	15.0
Primary Conference	1	2.5
School Law	12	30.0
Special Education	3	7.5
Technology	40	100.0

Note. Totals do not add to 100% because respondents could choose more than one topic.

Table J9

Teacher Satisfaction with Lakeside R-I Professional Development (N=40)

Professional Development in my school district...					
	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
1. Meets my needs	0.00	12.50	2.50	67.50	17.50
2. Is nonthreatening	0.00	2.50	7.50	52.50	37.50
3. Is offered at a time convenient for me	0.00	2.50	5.00	47.50	45.00
4. Is time well spent	2.50	7.50	20.00	70.00	0.00
5. Is offered by instructors who are knowledgeable and effective	0.00	2.50	7.50	67.50	22.50
6. Is generally a positive experience	0.00	2.50	7.50	77.50	12.50

Table J10

Teacher Learning from Lakeside R-I Professional Development (N=40)

Because of professional development, I have learned:					
	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
1. Practical instructional strategies	0.00	10.00	7.50	65.00	17.50
2. New knowledge and skills	0.00	2.50	7.50	62.50	27.50
3. The theory behind the practice	0.00	7.50	22.50	57.50	12.50
4. New concepts connected to prior knowledge	0.00	0.00	12.50	65.00	22.50

Table J11

Teacher Perceptions on Lakeside R-I Support of Professional Development (N = 40)

Professional development in my school district:					
	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
1. Has a positive impact on the organization as a whole	0.00	5.00	12.50	67.50	15.00
2. Has a positive impact on the culture and climate in my school	0.00	5.00	20.00	60.00	15.00
3. Is often conducted during the school day	0.00	2.50	7.50	60.00	30.00
4. Leads to in-service credit or a stipend	12.50	27.50	30.00	27.50	2.50

	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
Is recognized as being extremely important by the following:					
1. Board of Education	0.00	7.50	15.00	45.00	32.50
2. District Administrators	0.00	5.00	5.00	47.50	42.50
3. Building Administrators	0.00	2.50	2.50	50.00	45.00
4. My Colleagues	0.00	5.00	15.00	70.00	10.00
5. Myself	0.00	2.50	2.50	67.50	27.50
6. Parents	0.00	10.00	60.00	27.50	2.50

Table J12

*Teacher Perceptions on New Learning from Lakeside R-I Professional Development**(N=40)*

After I have participated in a professional development experience, I usually:					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Go back and experiment or practice with new instructional strategies	0.00	5.00	7.50	72.50	15.00
2. Implement/ apply new instructional practices	0.00	5.00	7.50	72.50	15.00
3. Become committed to new teaching strategies	0.00	5.00	42.50	42.50	10.00
4. Note positive changes in my teaching	0.00	5.00	30.00	52.50	12.50
5. Make long-lasting changes in my teaching	0.00	15.00	35.00	42.50	7.50

Table J13

Teacher Perceptions of Lakeside R-I Professional Development Impact on Student Achievement (N=40)

Generally, my professional development impacts my students in the following ways:

	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
1. It makes a positive impact on my students' learning	0.00	5.00	15.00	75.00	5.00
2. Student achievement increases	0.00	5.00	37.50	52.50	5.00
3. Students are more engaged in learning	0.00	5.00	32.50	57.50	5.00
4. Students are involved in their own learning	0.00	12.50	35.00	45.00	7.50
5. Classroom management has improved	2.50	7.50	35.00	50.00	5.00

	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
6. Student achievement has risen on state or district assessments	0.00	0.00	32.50	50.00	17.50
7. Student achievement has risen on teacher or classroom assessments	0.00	0.00	35.00	52.50	12.50
8. Students' confidence as learners has improved	0.00	5.00	35.00	47.50	12.50

Table J14

Lakeside R-I Teacher Perceptions about Teaching and Learning (N=40)

As a result of professional development, my attitudes and beliefs about teaching and learning change when:

	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
1. The experience was meaningful to me	0.00	2.50	2.50	60.00	35.00
2. I learned practical instructional strategies	0.00	2.50	2.50	62.50	32.50
3. My teaching becomes more effective	0.00	2.50	7.50	52.50	37.50
4. I am more efficient or productive as a teacher	0.00	2.50	12.50	50.00	35.00
5. I've enjoyed the experience	0.00	2.50	2.50	65.00	30.00
6. I become empowered in new ways	0.00	2.50	15.00	55.00	27.50
7. I have learned to meet the various needs of all of my students	0.00	5.00	12.50	57.50	25.00
8. It has a positive impact on student behavior	0.00	0.00	22.50	45.00	32.50

	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
9. My students become more actively engaged in learning	0.00	0.00	17.50	50.00	32.50
10.I can see a positive impact on student achievement	0.00	0.00	17.50	52.50	30.00
11.It impacts my annual performance evaluations positively	0.00	2.50	32.50	40.00	25.00

Appendix K

Lakeside R-I Survey Results' Descriptive Statistics

Table K1

Professional Development in my school district...							
	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
1. Meets my needs	3.90	0.84	0.71	2.00	5.00	-1.16	1.30
2. Is non-threatening	4.25	0.71	0.50	2.00	5.00	-0.86	1.27
3. Is offered at a time convenient for me	4.35	0.70	0.49	2.00	5.00	-1.08	1.82
4. Is time well spent	3.58	0.75	0.56	1.00	4.00	-1.82	2.92
5. Is offered by instructors who are knowledgeable and effective	4.10	0.63	0.40	2.00	5.00	-0.72	2.32
6. Is generally a positive experience	4.00	0.55	0.31	2.00	5.00	-0.95	4.34

Note: (N = 40)

Table K-2

Because of professional development, I have learned:

	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
1. Practical instructional strategies	3.90	0.81	0.66	2.00	5.00	-1.03	1.22
2. New knowledge and skills	4.15	0.66	0.44	2.00	5.00	-0.73	1.79
3. The theory behind the practice	3.75	0.78	0.60	2.00	5.00	-0.56	0.32
4. New concepts connected to prior knowledge	4.10	0.59	0.35	3.00	5.00	-0.02	0.01

Note: ($N = 40$)

Table K-3

Professional development in my school district:							
	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
1. Has a positive impact on the organization as a whole	3.93	0.69	0.48	2.00	5.00	-0.87	1.81
2. Has a positive impact on the culture and climate in my school	3.85	0.74	0.54	2.00	5.00	-0.57	0.65
3. Is often conducted during the school day	4.18	0.68	0.46	2.00	5.00	-0.75	1.60
4. Leads to in-service credit or a stipend	2.80	1.07	1.14	1.00	5.00	-0.11	-0.86

	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
Is recognized as being extremely important by the following:							
5. Board of Education	4.03	0.89	0.79	2.00	5.00	-0.74	0.02
6. District Administra- tors	4.28	0.78	0.61	2.00	5.00	-1.21	1.79
7. Building Administra- tors	4.38	0.67	0.45	2.00	5.00	-1.15	2.56
8. My Colleagues	3.85	0.66	0.44	2.00	5.00	-0.95	1.98
9. Myself	4.20	0.61	0.37	2.00	5.00	-0.84	3.35
10. Parents	3.23	0.66	0.44	2.00	5.00	0.29	0.38

Note: (N = 40)

Table K-4

After I have participated in a professional development experience, I usually:

	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
1. Go back and experiment or practice with new instructional strategies	3.98	0.66	0.44	2.00	5.00	-1.10	3.03
2. Implement/apply new instructional practices	3.98	0.66	0.44	2.00	5.00	-1.10	3.03
3. Become committed to new teaching strategies	3.58	0.75	0.56	2.00	5.00	0.12	-0.25
4. Note positive changes in my teaching	3.73	0.75	0.56	2.00	5.00	-0.26	-0.01
5. Make long-lasting changes in my teaching	3.43	0.84	0.71	2.00	5.00	-0.16	-0.56

Note: ($N = 40$)

Table K-5

Generally, my professional development impacts my students in the following ways:

	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
1. It makes a positive impact on my students' learning	3.80	0.61	0.37	2.00	5.00	-1.33	2.82
2. Student achievement increases	3.58	0.68	0.46	2.00	5.00	-0.29	0.05
3. Students are more engaged in learning	3.63	0.67	0.45	2.00	5.00	-0.49	0.30
4. Students are involved in their own learning	3.48	0.82	0.67	2.00	5.00	-0.21	-0.42

	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
5. Classroom management has improved	3.48	0.82	0.67	1.00	5.00	-0.81	1.12
6. Student achievement has risen on state or district assessments	3.85	0.70	0.49	3.00	5.00	0.21	-0.87
7. Student achievement has risen on teacher or classroom assessments	3.78	0.66	0.44	3.00	5.00	0.27	-0.66
8. Students' confidence as learners has improved	3.68	0.76	0.58	2.00	5.00	-0.09	-0.24

Note: (N = 40)

Table K-6

As a result of professional development, my attitudes and beliefs about teaching and learning change when:

	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
1. The experience was meaningful to me	4.28	0.64	0.41	2.00	5.00	-0.93	2.71
2. I learned practical instructional strategies	4.25	0.63	0.40	2.00	5.00	-0.89	2.87
3. My teaching becomes more effective	4.25	0.71	0.50	2.00	5.00	-0.86	1.27
4. I am more efficient or productive as a teacher	4.18	0.75	0.56	2.00	5.00	-0.69	0.44
5. I've enjoyed the experience	4.23	0.62	0.38	2.00	5.00	-0.86	3.07
6. I become empowered in new ways	4.08	0.73	0.53	2.00	5.00	-0.53	0.40

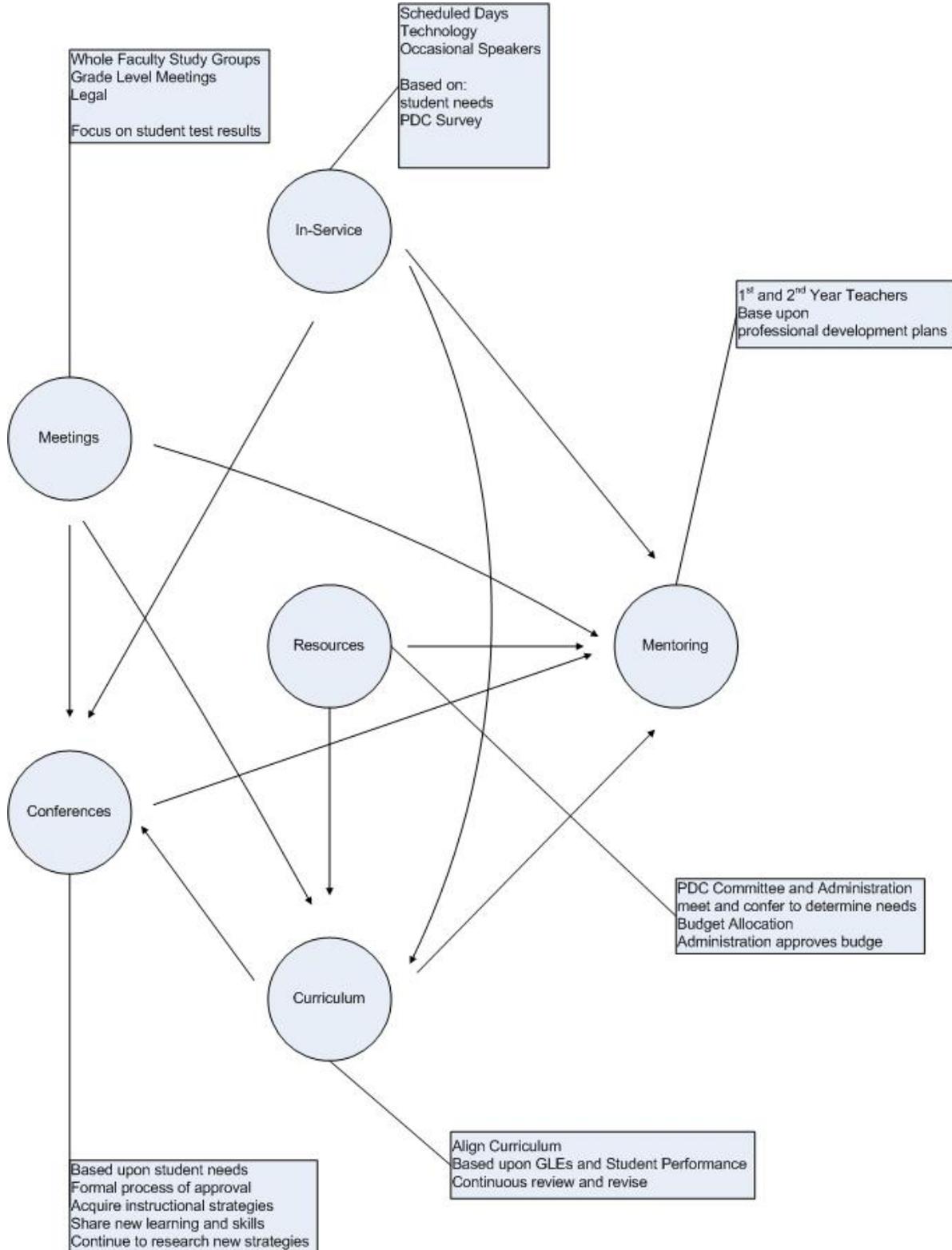
	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
7. I have learned to meet the various needs of all of my students	4.03	0.77	0.59	2.00	5.00	-0.76	0.91
8. It has a positive impact on student behavior	4.10	0.74	0.55	3.00	5.00	-0.17	-1.13
9. My students become more actively engaged in learning	4.15	0.70	0.49	3.00	5.00	-0.21	-0.87
10. I can see a positive impact on student achievement	4.13	0.69	0.47	3.00	5.00	-0.16	-0.79
11. It impacts my annual performance evaluations positively	3.88	0.82	0.68	2.00	5.00	-0.05	-0.89

	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
12. I receive positive feedback from my supervisor	3.88	0.91	0.83	2.00	5.00	-0.60	-0.23
13. My efforts are recognized	3.78	1.00	1.00	1.00	5.00	-0.82	0.40
14. I feel proud of my accomplishments	4.15	0.74	0.54	2.00	5.00	-0.65	0.53
15. It connects to district needs and overall school improvement	4.08	0.86	0.74	2.00	5.00	-0.66	-0.13

Note: ($N = 40$)

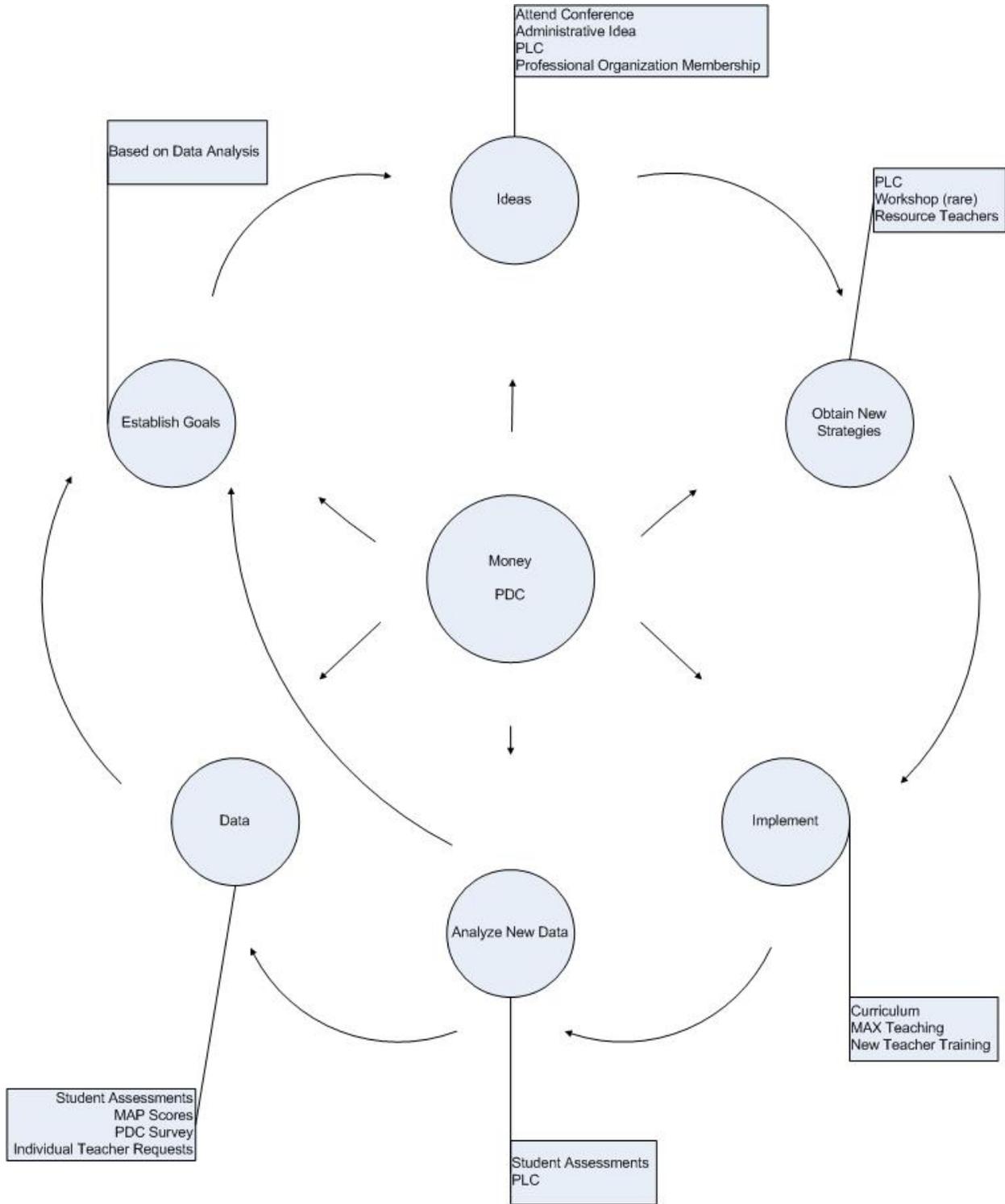
Appendix L

Lakeside R-I Elementary Teachers' Consensus Professional Development Model



Appendix M

Lakeside R-I Secondary Teachers' Consensus Professional Development Model



Appendix N

Plainview R-II Achievement and Survey Results

Table N1

Top 50 Achieving Large K-12 Districts for the Years 2001 through 2005

District Name	Communication Arts			Overall		
	3rd	7th	11th	CA	MA	Total
K	11	12	30	13	7	11
L	37	36	1	17	13	12
M	43	21	18	18	12	13
N	5	25	14	11	21	14
O	18	13	5	9	33	15
P	67	33	12	34	14	16
Q	58	3	23	19	17	17
R	56	8	21	21	18	18
S	28	22	54	31	15	19
T	45	17	10	16	28	20
U	15	48	22	22	23	21
V	7	60	26	23	20	22
W	38	15	16	15	32	23
X	12	69	24	33	19	24
Y	40	45	29	36	16	25
Z	34	40	28	29	22	26
AA	36	49	20	32	27	27
BB	8	50	36	24	30	28
CC	29	26	41	27	31	29
DD	26	29	43	28	41	30

District Name	Communication Arts			Overall		
	3rd	7th	11th	CA	MA	Total
EE	39	42	38	37	29	31
FF	59	6	19	20	47	32
GG	41	32	65	47	24	33
HH	33	30	4	14	57	34
II	35	31	37	30	44	35
Plainview	53	34	57	49	34	36
JJ	79	38	47	54	26	37
KK	25	58	51	44	42	38
LL	46	55	53	52	35	39
MM	24	39	32	25	59	40
NN	51	44	31	42	48	41
OO	49	35	62	51	43	42
PP	23	84	59	56	37	43
QQ	32	73	67	58	36	44
RR	42	66	35	48	46	45
SS	77	10	27	35	56	46
TT	60	2	33	26	66	47
UU	22	63	87	59	40	48
VV	57	59	66	62	39	49
WW	64	23	50	45	53	50

Note: Top 10 highest Achieving districts were omitted due to their low numbers of student receiving free or reduced priced lunch.

Table N2

Top 50 Achieving Large K-12 Districts for the Years 2001 through 2005

District Name	Mathematics			Overall		
	4th	8th	10th	CA	MA	Total
K	5	9	11	13	7	11
L	18	20	7	17	13	12
M	12	14	16	18	12	13
N	42	26	18	11	21	14
O	37	52	21	9	33	15
P	33	11	6	34	14	16
Q	39	8	32	19	17	17
R	47	19	14	21	18	18
S	22	22	24	31	15	19
T	51	35	15	16	28	20
U	14	37	41	22	23	21
V	36	24	25	23	20	22
W	58	31	20	15	32	23
X	25	36	23	33	19	24
Y	15	17	44	36	16	25
Z	27	29	35	29	22	26
AA	35	43	19	32	27	27
BB	31	27	50	24	30	28
CC	40	32	36	27	31	29
DD	17	47	61	28	41	30
EE	45	34	27	37	29	31
FF	77	18	46	20	47	32
GG	20	15	58	47	24	33

District Name	Mathematics			Overall		
	4th	8th	10th	CA	MA	Total
HH	79	67	26	14	57	34
II	64	28	45	30	44	35
Plainview	32	41	37	49	34	36
JJ	30	44	22	54	26	37
KK	24	61	42	44	42	38
LL	23	57	30	52	35	39
MM	43	55	75	25	59	40
NN	66	38	40	42	48	41
OO	59	21	49	51	43	42
PP	10	51	51	56	37	43
QQ	53	23	34	58	36	44
RR	26	54	59	48	46	45
SS	92	40	38	35	56	46
TT	50	58	85	26	66	47
UU	19	49	56	59	40	48
VV	34	30	55	62	39	49
WW	72	60	33	45	53	50

Table N3

Top 50 Achieving Large K-12 Districts Ranked by Average Expenditures per ADA

District Name	Achievement Rank	Average		
		Expenditures	Enrollment	SES%
KK	38	5602	3674.2	43.9
Plainview	36	5626	4290.4	43.6
TT	47	5386	2057.8	43.4
QQ	44	5530	1978.6	30.8
Z	26	5078	3308.6	28.5
JJ	37	5022	4897.2	26.3
O	15	5353	4012	25.1
UU	48	5248	3592.8	23.8
V	22	5236	4601.4	23.0
GG	33	5761	3275.8	6.3
MM	40	5928	2995	29.4
HH	34	5974	2483.6	41.2
FF	32	6017	3650.8	47.4
AA	27	6095	2561.8	45.4
BB	28	6319	3143.8	26.9
RR	45	6340	11633.4	50.3
SS	46	6359	3162	39.6
EE	31	6419	17627.6	10.1
X	24	6444	3610.2	43.9
Y	25	6448	24317.2	38.0
R	18	6498	4085.2	39.4
II	35	6517	2364.6	23.6

Average

District Name	Achievement Rank	Average		
		Expenditures	Enrollment	SES%
N	14	6528	2379.8	32.0
Q	17	6564	2288.2	15.2
PP	43	6580	11163.2	23.1
DD	30	6700	3879.6	17.6
S	19	6731	11816.8	20.2
G	7	6881	12854.4	10.6
L	12	6934	8280.2	33.7
M	13	7021	4036.4	40.9
T	20	7052	1980	37.0
OO	42	7061	7183.4	18.7
WW	50	7064	4022.4	42.1
CC	29	7135	18532	7.0
NN	41	7163	2352.2	44.3
C	3	7199	21797.8	12.5
I	9	7205	7379.6	12.2
VV	49	7317	16994.2	27.2
E	5	7425	14999.8	8.7
W	23	7573	2568.4	24.3
J	10	7788	9295.2	14.9
K	11	7875	5364.8	18.1
P	16	7880	16011.8	29.3
LL	39	8067	5983.2	24.4
H	8	8640	4156.4	19.8
F	6	8642	19772.2	15.2
D	4	9089	5086.8	18.8

Average

District	Achievement			
Name	Rank	Expenditures	Enrollment	SES%
U	21	10737	6148.6	29.9
B	2	11932	3249	8.0
A	1	13999	2493.4	15.5

Table N4

Plainview R-II Demographic Data of Survey Respondents

		Frequency (N=202)	Percent
Years Teaching Experience	1-3	43	21.29
	4-9	45	22.28
	10-14	39	19.31
	15-19	25	12.38
	20-24	18	8.91
	25-29	22	10.89
	30+	10	4.95
Years in District	1-3	68	33.66
	4-9	60	29.70
	10-14	30	14.85
	15-19	13	6.44
	20-24	10	4.95
	25-29	15	7.43
	30+	6	2.97
Grade Level ^a	Primary (K-2)	55	27.23
	Elementary (3-5)	43	21.29
	Middle (6-8)	42	20.79
	High School (9-12)	72	35.64

^aTotals do not sum to 100% because respondents could choose more than one option.

Table N5

Frequency Data for Plainview R-II Professional Development Plan and Goals

		Frequency (N=198)	Percent of Respondents
Aware of Professional Development Plan Goals	No	5	2.53
	Yes	193	97.47
Professional Development Plan linked to Student Achievement	No	1	0.51
	Not Sure	3	1.52
	Yes	194	97.98
Professional Development Plan linked to Teacher Evaluation	No	13	6.57
	Not Sure	45	22.73
	Yes	140	70.71

Table N6

Frequency Data for Professional Development Designs Participated in by Plainview

R-II Teachers

Professional development in my district is offered:		
	Frequency (N=198)	Percent of Respondents
Conference days	86	43.40
Before/after school	166	83.80
During the day	171	86.40
Full days during summer	112	56.60
Beginning of school year	175	88.40
End of school year	38	19.20
Weekends	6	3.00
Evenings	79	39.90
Online	2	1.00
Lunch Hour	1	0.50

Note. Totals do not add to 100% because respondents could choose more than one option.

Table N7

Frequency Data for Professional Development Format Participated in by Respondents

	Frequency (N=198)	Percent of Respondents
Individually guided staff development		
Professional Development Plan	155	78.3
Professional Improvement Plan	22	11.1
Guided Practice	122	61.6
Reflection	105	53
Observation and assessment		
Classroom observation and assessment by administrator	188	94.9
Classroom observation by fellow teacher	88	44.4
Mentoring	118	59.6
Involvement in a development/improvement process		
Curriculum development days	175	88.4
School improvement committees	150	75.8
Training		
Presentations or demonstrations	177	89.4
Workshops or seminars	188	94.9
Conferences	144	72.7
Expert lectures or motivational speeches	127	64.1

	Frequency (N=198)	Percent of Respondents
Inquiry		
Peer study groups	100	50.5
Inquiry/action research	103	52
Courses		
Graduate courses	161	81.3
Long-term courses within the district, with in-class support	22	11.1
Long-term courses within the district, without in-class support	19	9.6
Continuing education or adult education courses	36	18.2
Teacher center courses	22	11.1
Other	5	2.5

Table N8

Plainview R-II Frequency Data Related to Professional Development Content

	Frequency (N=185)	Percent of Respondents
Assessment	16	8.65
At-Risk/Poverty	28	15.14
Brain Research	60	32.43
Classroom Management	10	5.41
Communications Arts	79	42.70
Conferences	5	2.70
Cooperative Learning	20	10.81
Department Grade Level	13	7.03
Differentiated Instruction	18	9.73
Instructional Practices Inventory	7	3.78
Learning Styles	33	17.84
MAX Teaching	47	25.41
new Teacher Induction	8	4.32
Positive Behavior Support	10	5.41
Professional Learning Communities	32	17.30
Health, Safety, and Security	7	3.78
Special Education	20	10.81
Technology	92	49.73
Other 10	10	5.41

Note. Totals do not add to 100% because respondents could choose more than one topic.

Table N9

Teacher Satisfaction with Plainview R-II Professional Development (N=193)

Professional Development in my school district...					
	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
Meets my needs	1.04	6.22	6.74	55.96	30.05
Is nonthreatening	0.00	6.22	4.15	51.30	38.34
Is offered at a time convenient for me	0.52	3.11	10.88	54.92	30.57
Is time well spent	1.04	7.25	13.99	55.44	22.28
Is offered by instructors who are knowledgeable and effective	0.52	2.59	8.81	55.44	32.64
Is generally a positive experience	0.00	5.18	6.74	56.48	31.61

Table N10

Teacher Learning from Plainview R-II Professional Development (N=193)

Because of professional development, I have learned:					
	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
Practical instructional strategies	0.00	4.15	7.25	54.92	33.68
New knowledge and skills	0.00	3.11	6.74	56.99	33.16
The theory behind the practice	0.52	8.29	18.65	50.26	22.28
New concepts connected to prior knowledge	0.00	4.66	12.44	55.96	26.94

Table N11

*Teacher Perceptions on Plainview R-II Support of Professional Development**(N = 193)*

Professional development in my school district:					
	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
Has a positive impact on the organization as a whole	0.52	6.22	7.77	55.96	29.53
Has a positive impact on the culture and climate in my school	1.55	6.74	13.99	52.33	25.39
Is often conducted during the school day	0.00	12.44	9.84	52.85	24.87
Leads to in-service credit or a stipend	2.07	9.84	18.13	44.04	25.91
Is recognized as being extremely important by the following:					
Board of Education	0.00	0.00	12.95	43.52	43.52
District Administrators	0.00	0.00	4.15	42.49	53.37
Building Administrators	0.00	0.52	3.11	43.52	52.85
My Colleagues	1.55	6.74	10.88	57.51	23.32
Myself	0.00	1.55	6.74	52.33	39.38
Parents	2.07	10.88	58.55	24.35	4.15

Table N12

Teacher Perceptions on New Learning from Plainview R-II Professional Development
(N=193)

After I have participated in a professional development experience, I usually:					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Go back and experiment or practice with new instructional strategies	1.04	2.59	4.66	59.07	32.64
Implement/ apply new instructional practices	1.04	1.55	4.66	65.80	26.94
Become committed to new teaching strategies	1.04	5.70	22.80	55.96	14.51
Note positive changes in my teaching	0.52	3.11	17.10	59.07	20.21
Make long-lasting changes in my teaching	0.52	6.22	23.32	56.48	13.47

Table N13

Teacher Perceptions of Plainview R-II Professional Development Impact on Student Achievement (N=193)

Generally, my professional development impacts my students in the following ways:					
	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
1. It makes a positive impact on my students' learning	0.00	3.63	9.84	64.25	22.28
2. Student achievement increases	0.00	5.18	21.24	56.48	17.10
3. Students are more engaged in learning	0.00	4.66	10.88	61.66	22.80
4. Students are involved in their own learning	0.52	5.18	17.62	58.03	18.65
5. Classroom management has improved	0.52	9.33	18.65	56.99	14.51
6. Student achievement has risen on state or district assessments	0.52	3.11	34.72	48.70	12.95
7. Student achievement has risen on teacher or classroom assessments	0.52	4.66	25.91	55.44	13.47
8. Students' confidence as learners has improved	0.52	6.22	23.83	53.37	16.06

Table N14

*Plainview R-II Teacher Perceptions about Teaching and Learning**(N=193)*

As a result of professional development, my attitudes and beliefs about teaching and learning change when:					
	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
1. The experience was meaningful to me	0.52	0.52	3.63	51.81	43.52
2. I learned practical instructional strategies	0.52	1.04	4.66	45.60	48.19
3. My teaching becomes more effective	0.00	1.55	8.29	48.19	41.97
4. I am more efficient or productive as a teacher	0.00	1.04	8.29	47.67	43.01
5. I've enjoyed the experience	0.52	2.07	7.77	49.74	39.90
6. I become empowered in new ways	0.52	3.63	13.47	46.63	35.75
7. I have learned to meet the various needs of all of my students	0.00	2.59	6.74	50.78	39.90
8. It has a positive impact on student behavior	0.52	2.07	8.29	52.33	36.79

	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
9. My students become more actively engaged in learning	0.52	0.52	9.33	48.19	41.45
10. I can see a positive impact on student achievement	0.52	0.52	9.84	47.15	41.97
11. It impacts my annual performance evaluations positively	0.00	3.11	19.69	50.26	26.94

Appendix O

Plainview R-II Survey Responses' Descriptive Statistics

Table O1

Professional Development in my school district							
	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
5. Meets my needs	4.08	0.84	0.71	1	5	-1.21	1.92
6. Is nonthreatening	4.22	0.79	0.63	2	5	-1.17	1.51
7. Is offered at a time convenient for me	4.12	0.76	0.57	1	5	-0.93	1.58
8. Is time well spent	3.91	0.86	0.74	1	5	-0.91	0.94
9. Is offered by instructors who are knowledgeable and effective	4.17	0.73	0.54	1	5	-1.00	2.03
10. Is generally a positive experience	4.15	0.76	0.57	2	5	-0.98	1.32

Note: (N=193)

Table O2

Because of professional development, I have learned:

	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
1. Practical instructional strategies	4.18	0.74	0.55	2	5	-0.93	1.25
2. New knowledge and skills	4.20	0.70	0.48	2	5	-0.86	1.39
3. The theory behind the practice	3.85	0.88	0.77	1	5	-0.65	0.11
4. New concepts connected to prior knowledge	4.05	0.76	0.58	2	5	-0.73	0.63

Note: (N=193)

Table O3

Professional development in my school district:							
	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
1. Has a positive impact on the organization as a whole	4.08	0.82	0.67	1	5	-1.07	1.50
2. Has a positive impact on the culture and climate in my school	3.93	0.90	0.80	1	5	-0.96	1.02
3. Is often conducted during the school day	3.90	0.92	0.84	2	5	-0.79	-0.02
4. Leads to in-service credit or a stipend	3.82	1.00	0.99	1	5	-0.75	0.08

	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
Is recognized as being extremely important by the following:							
5. Board of Education	4.31	0.69	0.47	3	5	-0.48	-0.82
6. District Administrators	4.49	0.58	0.33	3	5	-0.62	-0.58
7. Building Administrators	4.49	0.59	0.34	2	5	-0.81	0.54
8. My Colleagues	3.94	0.87	0.75	1	5	-1.10	1.54
9. Myself	4.30	0.66	0.44	2	5	-0.74	0.85
10. Parents	3.18	0.76	0.57	1	5	-0.01	0.88

Note: (N=193)

Table O4

After I have participated in a professional development experience, I usually:

	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
1. Go back and experiment or practice with new instructional strategies	4.20	0.73	0.53	1.00	5.00	-1.38	3.93
2. Implement/apply new instructional practices	4.16	0.67	0.45	1.00	5.00	-1.36	5.18
3. Become committed to new teaching strategies	3.77	0.80	0.65	1.00	5.00	-0.72	0.90
4. Note positive changes in my teaching	3.95	0.74	0.54	1.00	5.00	-0.71	1.25
5. Make long-lasting changes in my teaching	3.76	0.78	0.61	1.00	5.00	-0.62	0.57

Note: (N=193)

Table O5

Generally, my professional development impacts my students in the following ways:

	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
1. It makes a positive impact on my students' learning	4.05	0.68	0.47	2	5	-0.76	1.46
2. Student achievement increases	3.85	0.76	0.57	2	5	-0.48	0.18
3. Students are more engaged in learning	4.03	0.72	0.53	2	5	-0.79	1.13
4. Students are involved in their own learning	3.89	0.78	0.61	1	5	-0.74	0.93
5. Classroom management has improved	3.76	0.83	0.70	1	5	-0.71	0.38
6. Student achievement has risen on state or district assessments	3.70	0.75	0.56	1	5	-0.20	0.20

	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
7. Student achievement has risen on teacher or classroom assessments	3.77	0.76	0.58	1	5	-0.52	0.59
8. Students' confidence as learners has improved	3.78	0.81	0.65	1	5	-0.55	0.34

Note: (N=193)

Table O6

As a result of professional development, my attitudes and beliefs about teaching and learning change when:

	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
1. The experience was meaningful to me	4.37	0.63	0.40	1	5	-1.12	3.64
2. I learned practical instructional strategies	4.40	0.68	0.46	1	5	-1.30	3.27
3. My teaching becomes more effective	4.31	0.69	0.47	2	5	-0.77	0.57
4. I am more efficient or productive as a teacher	4.33	0.67	0.45	2	5	-0.70	0.30
5. I've enjoyed the experience	4.26	0.73	0.54	1	5	-1.10	2.13
6. I become empowered in new ways	4.13	0.82	0.67	1	5	-0.89	0.84

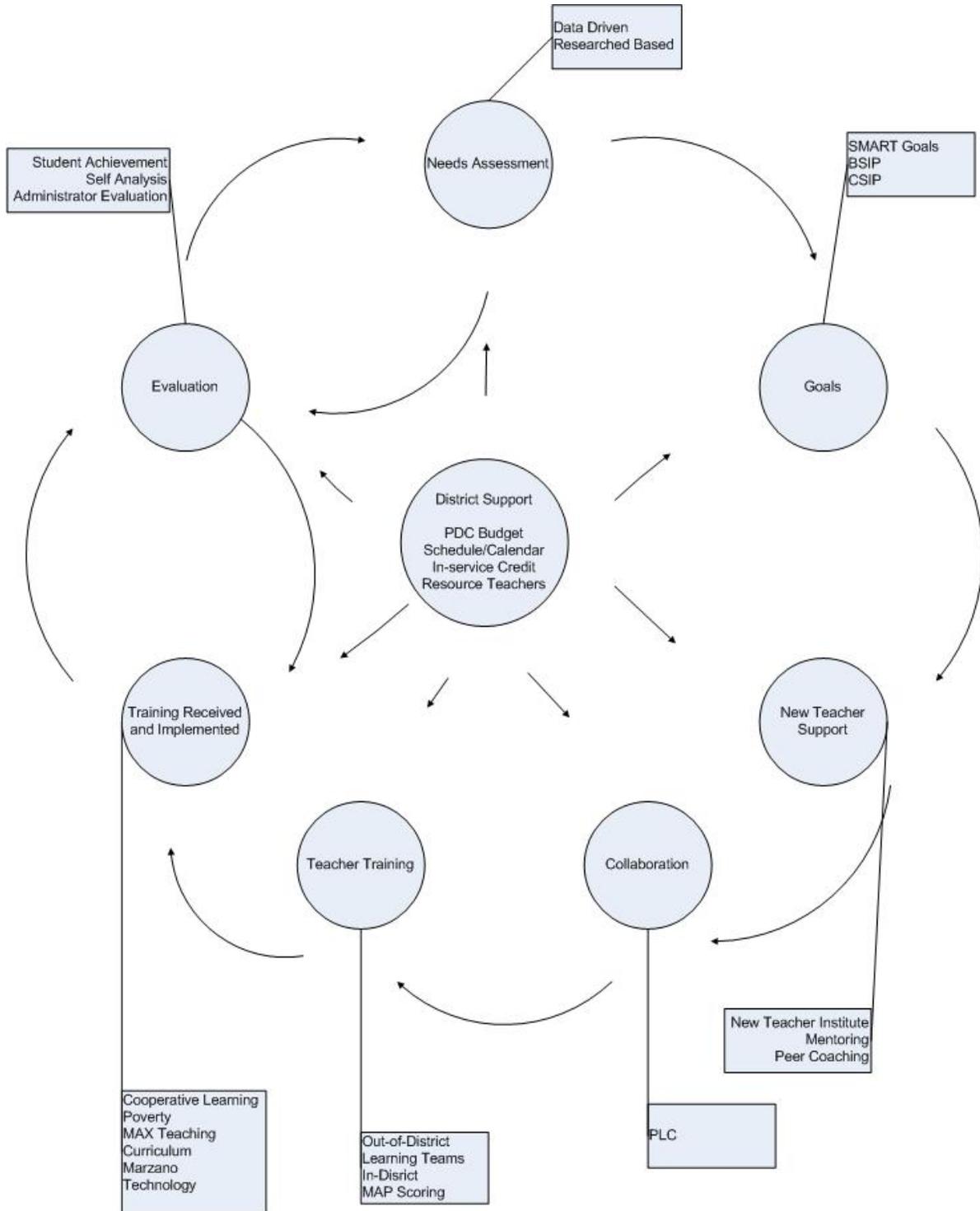
	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
7. I have learned to meet the various needs of all of my students	4.28	0.70	0.49	2	5	-0.91	1.16
8. It has a positive impact on student behavior	4.23	0.73	0.53	1	5	-1.03	2.08
9. My students become more actively engaged in learning	4.30	0.70	0.49	1	5	-0.94	1.80
10. I can see a positive impact on student achievement	4.30	0.71	0.50	1	5	-0.94	1.66
11. It impacts my annual performance evaluations positively	4.01	0.77	0.59	2	5	-0.43	-0.19

	Mean	SD	Variance	Min.	Max.	Skew	Kurtosis
11. I receive positive feedback from my supervisor	4.05	0.83	0.68	1	5	-1.04	1.60
12. My efforts are recognized	3.96	0.91	0.84	1	5	-0.83	0.43
13. I feel proud of my accomplishments	4.23	0.67	0.45	2	5	-0.52	0.13
14. It connects to district needs and overall school improvement	4.19	0.64	0.41	2	5	-0.43	0.40

Note: (N=193)

Appendix P

Plainview R-II Elementary Teachers' Consensus Professional Development Model



Appendix Q

Plainview R-II Secondary Teachers' Consensus Professional Development Model

