PATTERNS OF VISION, ACTION, AND EFFECTS IN PROFESSIONAL DEVELOPMENT AS EXPERIENCED IN THE TEXAS CENTERS FOR PROFESSIONAL DEVELOPMENT AND TECHNOLOGY

DISSERTATION

Presented to the Graduate Council of the University of North Texas in Partial Fulfillment of the Requirements For the Degree of

DOCTOR OF PHILOSOPHY

By

Peggy Anne Kjelgaard, B.S., M.S.
Denton, Texas
August, 1996
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In 1992, the state of Texas awarded a number of inducement grants to collaboratives of universities, schools, and service centers to develop field-based professional development schools (PDSs) and provide preservice and inservice teachers with extensive professional development. This study investigated the design and effects of the professional development models in these Texas Centers for Professional Development and Technology (CPDTs).

This study used qualitative data collection and analysis procedures. Raw data were collected in the form of individual interviews, focus group interviews, documentation, and fieldnotes. Forty-six interviews were completed involving a total of 83 respondents representing all partnering entities: university representatives, school representatives, education service center representatives, and policymakers. Documentation included annual and quarterly reports, grant applications, and program approval requests. Fieldnotes included observational data from site visits.

Data analysis was an iterative process using a constant comparative analysis of coded categories emerging from transcribed data. This comparison examined: the vision of professional development as perceived by the respondents, the enactment of professional
development as experienced by the respondents, and the effects that the CPDT initiative had on professional development as perceived by the respondents.

This study revealed 18 themes that were common across all eight Texas CPDTs. The themes revealed patterns of vision which included: developing a common ground, breaking barriers, evolving visions, and partnership tradeoffs. Patterns of enactment included formal and informal professional development opportunities. Patterns of effects included: empowerment of teachers, updating of university faculty on public school issues, better prepared classroom-ready interns, and more attention for K-12 students. Another pattern of effect included the distraction of "technology toys" and the difficulty keeping pace with new technologies. The study provided strong evidence that relationship building processes are crucial for building a sustained learning situation for a community of learners. The themes also provided information regarding the demands of institutionalizing and reculturing required to sustain the Professional Development School model.
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CHAPTER I

INTRODUCTION

The Professional Development School initiative is creating new dimensions of staff development (National Staff Development Council [NSDC], 1995). In this movement, preservice and inservice teacher education are being restructured to create versions of "learning communities" (Senge, 1990) providing educators the opportunity to learn from each other (Ponder & Holmes, 1992, Ponder & Kjelgaard, 1993). The Holmes Group (1986), a consortium of universities, first developed the concept of Professional Development Schools. This plan has been widely accepted and is shifting the structure and pedagogy of educational institutions across the nation (e.g., Adjunct ERIC Clearinghouse on Clinical Schools, Professional Development Schools Network, PDSnet, NSDC Network) (NSDC, 1995). Universities and schools collaborate to develop new means of educating preservice teachers with concurrent professional development among inservice teachers and university faculty.

In the state of Texas, the Centers for Professional Development and Technology (CPDT) initiative combines the concept of developing professional development schools with a concurrent emphasis on improved staff development to produce a joint effort that focuses on teaming and collaboration, restructured teaching and teacher education programs, and technology infusion. The assumptions underlying the CPDT initiative are that professional development programs for preservice and inservice educators will be
developed that will differ in substantial respects from "traditional" programs that do not combine university and school resources (Fullan, 1993). This study investigated whether and how the CPDTs represent this difference. What are the patterns of professional development represented in these Texas collaboratives? What is the impact of these patterns on the collaboratives?

This study addressed the characteristics of professional development opportunities within the Texas CPDTs by looking at three aspects: the visions of professional development programs; the patterns of enacted professional development programs; and the effects of professional development programs as perceived by key respondents and documented in data collected by the CPDTs.

Purpose of the Study

The purpose of this study was to describe the visions of professional development reform within the Texas CPDTs, the patterns of enacted professional development models, and the effects of these models as understood by policymakers, implementors, and practitioners.

Research Questions

This study focused on and was guided by the following research questions:

1. Describe the unique aspects of vision for professional development in your CPDT collaborative.

2. Describe the unique aspects of enactment for the various professional development programs in your CPDT collaborative.
3. Describe any unique effects that have occurred due to your CPDT’s professional development efforts.

These three questions are the results of modifications made on the original six questions (Appendix B). Due to repetitive interview results from my pilot study, truncating the original six questions into three general questions was necessary (see discussion on page 85).

Assumptions

The major assumptions underlying this study were as follows:

1. The key informants in the study have a developed “vision” of professional development (preservice teacher education and inservice staff development) reform that includes an idealized “vision” of what they would like to see occur and a practical “vision” of what they think probably has occurred or will occur.

2. The key informants are able to draw distinctions between their perceptions of a CPDT and non-CPDT environment.

3. Implementation of professional development reform has occurred to some extent in each of the eight centers under study.

Limitations

Because qualitative research methods produce a plethora of detailed data about a much smaller number of people and cases, generalizability is reduced (Patton, 1990). Even though research findings in this study were grounded in theory related to staff development and professional development school reform, generalization to professional
development schools not included in the study is not possible because each professional
development school has its own unique culture.

Qualitative inquiry identifies the researcher as the instrument, therefore the validity of
the study is dependent on the skill, competence, and rigor of the researcher (Patton,
1990). Guba and Lincoln comment on this:

Since as often as not the naturalistic inquirer is himself the instrument, changes
resulting from fatigue, shifts in knowledge, and co-optation, as well as variations
resulting from differences in training, skill, and experience among different
“instruments,” easily occur. But this loss in rigor is more than offset by the flexibility,
insight, and ability to build on tacit knowledge that is the peculiar province of the
human instrument (Guba and Lincoln, 1981, p. 113).

Definition of Terms

1. The term professional development, as used in this study, includes preservice teacher
education, inservice staff development, and continuing education for university faculty.

2. Vision refers to the respondents perception of the “big picture.” Bennis and Nanus
(cited in Holmes, 1991) describe the vision as a “clear view of a believable and attractive
future for an organization, a target that beckons.” Senge (cited in Holmes, 1991) states “a
vision takes a picture of the whole that is more than a mere snapshot: it reflects on the
process of picture-making as well as the end product.” Renchler (cited in Holmes, 1991)
describes a vision as involving such components as educational philosophies, values,
missions, goals, cultures, staff development programs, curricula, organizational structures,
finances, and the myriad of other pieces that go into implementation processes of any
reform initiative.
3. An intern is a university student working toward teacher certification and participating in a field assignment in a professional development school.

4. A mentor teacher is a classroom teacher serving as the primary school-based provider of assistance to a university intern. This teacher shares her or his classroom experiences with the intern and is considered to have areas of expertise to offer as mentorship responsibilities.

5. A field-based practitioner is an educator who works in the field. These practitioners are often teachers and administrators who are employed by school districts and who have direct contact with school-aged students.

6. A clinical faculty member is a field-based practitioner who has a range of responsibilities in both the school and university settings. For example, a classroom teacher from a professional development site may be assigned duties of being both a university site coordinator and a school campus team leader.

7. A key informant is a contact person who has personal knowledge of the situation being investigated and serves as a major data source.

8. Grounded theory (Glaser and Straus, 1967) emerges from the “bottom up” and draws abstractions from interconnected pieces of collected data (Bogden & Biklen, 1992). The theory is not set in a predetermined hypothesis; instead, it develops as data is collected and analyzed.
Background and Significance

The Texas CPDTs were established in 1991 by the state legislature as inducement grants to restructure teacher education in the state of Texas. The call for restructuring teacher education dates back to the report published in 1983 entitled *A Nation at Risk: The Imperative for Educational Reform*. Terrel H. Bell, U.S. Secretary of Education, initiated the development of this report by organizing the National Commission on Excellence in Education (NCEE). Chaired by David Pierpont Gardner, president of the University of Utah, NCEE was assigned the task of appraising the condition of American schools and reporting to the nation on what should be done to create a “first-rate education system” (Bell, 1988). This report pointedly criticized American education and sent the nation into a new wave of policy reform initiatives.

State leadership became an avenue for reform. The U.S. Department of Education (1984, p. 17) responded to the 1983 national report with *A Nation Responds*, a report describing state leadership as “one of the hallmarks of this reform effort.” Two years later, a survey administered by the Education Commission of the States reported two unifying themes in regard to state reform activity, one theme addressing more rigorous academic standards for students and the other seeking recognition and higher standards for teachers (Pipho, 1986, as found in Passow, 1990). The National Governors Association also responded to *A Nation at Risk* by pushing for the adoption of higher standards of academic excellence. State mandates on achievement, assessment, and accountability became the major focus.
The state of Texas responded to *A Nation at Risk* by establishing the Select Committee on Public Education (SCOPE) chaired by businessman Ross Perot, who was appointed by Governor Mark White. The Select Committee went around the state of Texas collecting information in response to *A Nation at Risk*. Recommendations from this committee led to the passage of House Bill 72. One of these recommendations included the “no pass/no play” mandate which required a passing grade of 70% instead of 60%, and barred students with any grade below 70% from extracurricular activities. Accreditation standards were also toughened, and state aid shut off to school systems that did not measure up. Toch (1991, p. 82) commented that the recommendations were “explosive” and they “reverberated throughout Texas education.”

The Southern Region Educational Board (SREB) had been investigating teacher education during the same period of time that Perot’s Select Committee was collecting data. Senator Carl Parker, SREB member, stated in an interview with Doyle Watts (1989, p.313) that he “believed colleges of education were abusing teacher preparation programs by including redundant material in their courses, substituting education courses for courses in other fields, and requiring worthless content.” Parker provided an example he found in the course catalog from the University of Texas in which a course on how to use a felt board was being offered for education majors. He commented that such “Mickey Mouse education courses” were “ridiculous” (Watts, 1989, p. 312).

The Select Committee on Higher Education was organized in 1985 by Governor White to take a much closer look at teacher education. Its recommendations influenced
the passage of Senate Bill 994, which eliminated undergraduate education degrees and set a cap of 18 credits in education courses for students preparing to become teachers.

Implementation of Senate Bill 994 had a major impact on elementary teacher preparation programs. Elementary professors were concerned that limiting the number of methods courses would seriously weaken the programs. These academicians argued the inability to prepare elementary teachers adequately under such circumstances. The educational turmoil that unfolded in response to Senate Bill 994 eventually led to including the language that defines the Texas “Centers for Professional Development and Technology” (CPDT) in House Bill 2885, an omnibus education bill passed by the 1991 Texas legislature.

The CPDT initiative was passed providing an initial twelve million dollars to restructure teacher education in the state of Texas. The Texas Education Agency and the State Higher Education Coordinating Board were responsible for crystallizing the concept of the CPDTs. These Centers, developed from the ideas of the Holmes Group (1986) and others (e.g., Lieberman, 1987 and Goodlad, 1986, 1990), were established as a statewide effort to create university-school collaboratives that make decisions regarding the improvement of preservice and inservice teacher education programs. The Professional Development School movement calls for improvement and implementation of effective staff development models to address restructuring efforts for teacher education.

The Holmes Group Report (1990) emphasized the need to improve the professional development of experienced teachers by requiring not only systematic training and formal socialization, but also by updating subject area knowledge, attending more closely to
students needs, developing new methods for building repertoire, and extending teacher influence beyond the bounds of their own classroom. The Holmes group continued by suggesting that the complexities of school-teaching cannot be mastered during the brief space of an initial preparation program. Continuing education is a necessity and teacher learning is "the key to the creation of excellent schools" (Holmes Group, 1990, p. 52). Due to the collaborative nature of professional development schools, university faculty also are nested in this reform as they become colleagues to schoolteachers in all endeavors of knowledge seeking and repertoire building.

The need to improve the professional development of experienced teachers is supported by a history of staff development changes. Prior to the 1980s, many teachers and administrators participated in staff development inservice programs because of mandates or incentives. Research in the mid- to late-1970s indicated an overall dissatisfaction from educators relating to the effectiveness of such inservice training (Ainsworth, 1976; Joyce & Peck, 1977; Zigarmi, Betz, & Jensen, 1977). Major research studies continued into the 1980s and a better understanding of what constitutes effective staff development began to take place (Berman & McLaughlin, 1978; Yarger, Howey, & Joyce, 1980). Sparks and Loucks-Horsley (1989, p. 96) list the following effective practices that resulted from the research: (a) programs conducted in school settings and linked to school-wide efforts; (b) teachers participating as helpers to each other and as planners, with administrators, of inservice activities; (c) emphasis on self instruction, with differentiated training opportunities; (d) teachers in active roles, choosing goals and activities for themselves; (e) emphasis on demonstration, supervised trials, and feedback
(training that is concrete and ongoing over time); and (f) ongoing assistance and support available on request.

Staff development became a vehicle for change in many school districts. The 1980s was a decade of growth for staff development, in which educators began to recognize that significant school improvement was dependent on people improvement, including staff developers, teachers, and administrators. Extensive staff development projects were initiated to improve student learning. Research on these projects along with craft knowledge generated by staff developers led to advances in understanding effective staff development models (Sparks & Loucks-Horsley, 1989).

The 1990s provided various reform movements to address the need for improving professional development of educators. The Professional Development School concept offers a model that focuses on improving the education of children by enhancing the professional development of preservice and inservice teachers through university and school collaboration. Teachers participating in a Professional Development School program may be affected by expanded roles and increased responsibilities. They are expected to exert influence beyond their classroom and into the larger arena of the school, school district, and the community (Levine, 1992; Darling-Hammond, 1994; Boles, 1994). Professional development needs continue to call for effective staff development for improving school programs and practices.
Review of Related Literature

*Professional Development Schools and Staff Development*

Since the mid-1980s, professional development schools have emerged across the nation in response to current demands for restructuring preservice and inservice teacher education. The following review of related literature provides a discussion pertaining to the professional development of inservice teachers as described in the context of the Professional Development School movement. In addition, the research method chosen for this study will be described to provide grounding and establish credibility.

Research on the professional development of inservice teachers participating in Professional Development School collaboratives is beginning to emerge. Most of the available research is descriptive in nature. For example, Boles (1994) describes a six-year study of a PDS partnership, the Learning/Teaching Collaborative (L/TC), in Brookline, Massachusetts. Miller and Silvernail (1994) describe the history and context of a Southern Maine Partnership involving the University of Southern Maine and the Wells School District. Grossman (1994) describes the history and context of a university-school partnership as affiliated with the Puget Sound Professional Development Center in Seattle, Washington. Whitford (1994) describes a Kentucky partnership involving Jefferson County Public Schools and the University of Louisville School of Education.

The establishment of the 1984 Jefferson County Public School Schools Gheens Professional Development Academy, developed by Phillip Schlechty, provides a unique context for this collaborative. Synder (1994) describes the collaborative efforts of
participants from Teachers College of Columbia University, two schools within New York City’s Community School District Three, and the United Federation of Teachers.

A series of common threads regarding professional development emerged from the above-mentioned university-school collaboratives to restructure preservice and inservice professional development programs. Although the initial focus of the centers was on preservice education, the need for staff development related to school improvement emerged as a major tenet as well. The common threads experienced by the participating inservice teachers tended to fall into three categories: (a) new leadership roles and responsibilities, (b) enhanced staff development and training, and (c) reflective practice opportunities.

New leadership roles and responsibilities involved cooperative teaching, site supervision, university course delivery, and action research. For example, in the Puget Sound Professional Development School collaborative, the public school teachers had the opportunity to become Teaching Associates, clinically appointed by the University of Washington (Grossman, 1994). Experienced teachers co-taught with university faculty in the Gheens Academy project (Whitford, 1994). Teachers in the Manhattan schools and Columbia University collaborative became involved in teacher research (Snyder, 1994). The Fairfax County initiative described a site-based coordinator role for teachers that involved being a communication liaison, an intern supervisor and placement coordinator, and a data collector (Lecos & Auton, 1993). The Learning/Teaching Collaborative in Massachusetts provided alternate teaching time for teachers to assume the role of curriculum writer, researcher, or student-teacher supervisor/college teacher (Boles, 1994).
All of the centers had enhanced the roles and responsibilities of inservice teachers in some sense. Teacher empowerment and increased value of teacher voice were recurring themes.

Staff development and training involved a series of workshops that evolved as professional development needs emerged. The University of Southern Maine collaborative discussed enhanced training for cooperating teachers and supervision (Miller and Silvernail, 1994). The Puget Sound Collaborative listed a series of workshop delivery models including peer coaching, site-based decision-making, supervision, and action research (Grossman, 1994). The Fairfax Collaborative offered ongoing professional development for participating clinical faculty including supervision, teacher education reform, effective teaching methods, and curriculum coordination. The clinical faculty were provided with release time for staff development and offered the opportunity to participate in conferences and professional development school site visits (Lecos & Auton, 1993).

Nested in staff development opportunities were various models for reflective practice. The Mastery of Learning project in the Southern Maine collaborative elaborated on “using the knowledge base” by providing days for the teachers to review research and participate in critical discussions and reflection (Miller and Silvernail, 1994). The Puget Sound program developed study groups and held “fireside chats” for reflection (Grossman, 1994). The Gheens Academy provided opportunity for professional reading and conversation (Whitford, 1994). The Columbia University collaborative developed interdisciplinary and school/college teaching teams that participated in in-depth reflection on practice (Snyder, 1994).
Method of Study

Staff development was the major focus of my study involving the Texas Centers for Professional Development and Technology (CPDTs). Using professional development schools, defined by the Holmes Group (1986) and others (e.g., Goodlad, 1986 & 1990; Lieberman, 1987), as units of analysis, this study provided information regarding: (a) the visions of professional development held by participants in professional development schools, (b) implementation of staff development in professional development schools, and (c) the effects of staff development programs on target groups in professional development schools.

I conducted this study using qualitative research methods. Qualitative constructs allowed me to describe models of professional development as they naturally occurred in the Texas CPDTs. Qualitative procedures, such as interviews and observations, illuminated the naturally occurring cycle of events from the participants' frame of reference (Patton, 1987; Bogdan & Bicklen, 1992). "The fundamental principle of qualitative interviewing is to provide a framework within which respondents can express their own understandings in their own terms" (Patton, 1987, p. 115). Gathering data in natural settings allowed reality-based contexts to be applied to the information.

Qualitative methods allowed me to study selected issues pertaining to the Texas CPDTs in depth and detail. By not being constrained to predetermined categories, I was able to allow the perceptions and experiences of the participants to direct the nature of the study. Since it is the people involved in the Texas CPDTs who must live within the changes of the professional development movement, it is their definitions that were used.
Due to my focus on the process of professional development within these centers, I was most interested in recurrent interactions. Bogdan and Biklen (1992) describe this process-oriented research through the lens of grounded theory, in which theory emerges from the bottom up. Through inductive data analysis, abstractions were built as the particulars were gathered and grouped.

Methodology

At the time of this study, a total of seventeen Texas Centers for Professional Development and Technology (CPDTs) had become funded entities in the statewide CPDT initiative. Funding had occurred over a three year period. Eight centers were funded during the first year; four additional centers the second year, and five centers the third year (Appendix A). This study used qualitative methods to investigate whether developmental differences were occurring in professional development models being implemented within the centers.

Nature of the Sample

Key informants chosen for this study included representatives from the eight original Texas Centers for Professional Development and Technology (CPDTs). All eight CPDTs represented a complete sample of centers that had been involved in implementation since 1992-93. As original CPDTs, these eight collaboratives had the longest history of all Texas CPDTs. Key informants selected from the original eight CPDTs included CPDT policymakers, CPDT administrators, public school administrators and teachers, and university faculty.
Data Collection

Data was collected on the selected Centers through several means, including key respondent interviews, focus group interviews, field observations, and document analysis. Triangulation of a variety of data sources allowed me to metaphorically intersect data details, providing a means for cross-data validity checks (Patton, 1990).

Key informants for this study were selected from a pool of participants from the selected Centers who were involved in creating and implementing Center concepts in the following capacities: (a) individuals who participated in writing the legislation, (b) Texas Education Agency personnel who translated legislative intent into the requests for application, (c) principal investigators or contact persons listed on the proposals, (d) directors of Center projects, (e) key university faculty, (f) key school personnel, and (g) persons nominated by other key informants who had knowledge of staff development processes and effects in the areas of collaboration, technology, and effective teaching practices under auspices of the Centers.

Key informant interviews were open-ended, allowing personal perspectives to be shared. These perspectives allowed me to gather data that I could not directly observe, such as feelings, thoughts, and intentions (Patton, 1990). For purposes of this study, I used a general interview guide approach which involved outlining in advance a set of issues that directly related to my research questions (Appendix B). The interview guide served as a checklist to ensure that the same basic information was being obtained from each respondent. Due to the various individual and group interviews designed to occur in this study, the interview guide was a valuable tool keeping the interactions focused while
allowing individual perspectives and experiences to emerge. Patton (1990) suggests that
the interview guide approach is especially useful in conducting group interviews because
of this intended focus of interactions.

I secured interview data through one of the following methods:
1. Audiotaped individual interviews were conducted face-to-face.
2. Audiotaped individual interviews were conducted over the telephone, only if the
researcher had acquired a pre-established rapport.
3. Audio/videotaped focus group interviews were conducted on site and face-to-face.

Participants were informed that the interview was being recorded and that the data
would be used as part of this dissertation and, possibly, in future publications. Participants
were assured that any request to keep the source of information confidential would be
honored. The process for conducting the audiotaped interviews was as follows:
1. I established rapport and provided a brief explanation of the study.
2. I requested permission to record the interview.
3. I asked the key informant specific, open-ended questions related to the research
questions of this study and used probes as necessary to evoke greater specificity.
4. I transcribed the interviews verbatim to written format.

I followed this interview process for individual and focus group interviews. Focus
group interviews were conducted with small groups, ranging from four to eight
participants, and provided data in a social context where participants reflected on their
own views in the context of the views of others. As much as possible, I organized the
focus groups according to their area of expertise, resulting in separate groups of staff
developers, technology coordinators, and teacher practitioners. My intent on separating these key participants was to avoid the need for building group awareness across expertise, therefore making more efficient use of time. I felt that more detail would be provided if focus groups were able to elaborate within the parameters of their own expertise. Patton (1990) states that such group dynamics provide a means for quality control in data collection because participants tend to focus each other away from incorrect or extreme views. The focus group interviews in this study were audiotaped. In order to ensure recognition of who was speaking, I kept brief notes during the interviews highlighting the speaker’s name and their first three to four words.

Initial interviews were done individually with key policymakers and Center directors. Focus group interviews were conducted on-site and face-to-face after the initial key respondents had nominated persons with knowledge of staff development processes and effects in the areas of collaboration, technology, and effective teaching practices.

Field observations and documents for analysis were collected during these on-site visits. Observational data involved gathering information that described the setting, the activities, the people, and the mission of the eight selected professional development centers. Program settings were described using the physical and demographic environment of each center’s schools and universities. When applicable, observational data included planned program activities and formal interactions, as well as events that occurred informally and unplanned. All observational data were collected and recorded in the form of fieldnotes.
I simultaneously kept a researcher’s journal, recording my own descriptions and interpretations that were separated from the participant’s perceptions. Tesch (1990, p. 87) relates this process to recording “researcher’s memos” in which the researcher constantly searches for connections and patterns in the data, writing down the analytical notions that are conceptual in intent. Due to familiarity with the setting, these recorded personal perceptions were analyzed for researcher bias. Validity and reliability checks included verifying my perceptions of what was heard and observed with the participants. Kamil (1985) suggests reexamining a researcher’s journal for contradictions with other data sources, emotional reactions, formal or informal expectations about occurrences, and judgmental rather than descriptive statements.

Document collection included the gathering of available historical and current artifacts in the form of staff development plans, governing and executive board minutes, campus improvement plans, annual reports, newsletters, and any type of material that related to the purpose of this study. Available files and records from the state funding agency were collected.

*Data Analysis*

Data analyzing and collecting processes ran parallel to each other and were informed by each other, with data collection dominating in the earlier phases and data analysis dominating in later phases (Tesch, 1990). Raw data sources, including interview transcripts, observational fieldnotes, and documents, were organized into a narrative description with major themes and illustrative examples extracted through a content analysis process. This process involved classifying segments of raw data by coding them with letters that symbolize the substance of the categories. These categories were
generated from a combination of my research questions that I considered to be relevant at the onset of the study and the raw data collected, allowing codes to emerge progressively and inductively. As new data were collected, they were compared with previous data in an iterative manner. This "constant comparative" method allowed categories to be modified if found to not fit the data (Glaser & Strauss, 1967, p. 45). If too many segments received the same code, I broke them into subcodes.

After all data was collected and coded, I clustered the codes into conceptual variables and analyzed them further, exploring for relationships (Tesch, 1990). This process was accomplished through the construction of matrices. Matrices provided graphical displays that compared one set of variables as identified in column headings with another set of variables representing the row headings (Appendix F & G). I used flow charts to graphically conceptualize the data by connecting geometrical shapes with one-way and two-way arrows to show associative, temporal, or interactive relationships among codes (Tesch, 1990). Using these techniques, as well as narrative presentation of the sites on a case-by-case basis, data was aggregated and presented by site, then collectively analyzed in pursuit of patterns and trends. This process of data analysis continued until repeated iteration identified defensible relationships. As the "chain of evidence" grew, conclusions were confirmed and conceptual statements were formed that represented the results of the study (Tesch, 1990, pg. 88).
CHAPTER II

REVIEW OF THE LITERATURE

Background

The past decade has been an active policy-making period in education, reflecting three waves of policy reform. On April 26, 1983, the White House released the report entitled *A Nation at Risk: The Imperative for Educational Reform*, which set the stage for the first wave of reform (Passow, 1990). Terrel H. Bell, U.S. Secretary of Education, initiated the development of this report by organizing the National Commission on Excellence in Education (NCEE). Chaired by Dave Pierpont Gardner, president of the University of Utah, NCEE was assigned the task of appraising the condition of American schools and reporting to the nation on what should be done to create a “first-rate education system” (Bell, 1988). This report pointedly criticized American education and sent the nation into a new wave of policy reform initiatives. Terrel H. Bell (1988, p. 115) describes the inertia behind *A Nation At Risk* as follows:

We needed some means of rallying the American people around their schools and colleges. Educators also needed to be shaken out of their complacency. More than two decades ago the Soviet Sputnik had spurred us into action to improve educational standards and performance. We needed an equally powerful spur today.

I wanted to stage an event that would jar the people into action on behalf of their educational system. Since I could not realistically plan on another Sputnik-type occurrence, I had to search for an alternative.
After the release of *A Nation At Risk*, a number of national reports involving organizations such as the National Governor's Association, the Committee on Secondary School Studies (Committee of Ten), the Carnegie Forum on Education, and the Holmes Group, emerged criticizing some aspect of American education and urging reform. Federal involvement had not been this active since the passage of the National Defense Education Act of 1958 (Passow, 1990).

State leadership became an avenue for reform efforts. In 1984, the U.S. Department of Education responded with a report entitled *A Nation Responds* which emphasized state leadership as "one of the hallmarks of this reform effort" (p. 17). Two years later, a survey administered by the Education Commission of the States reported two unifying themes in regard to state reform activity, one theme addressing more rigorous academic standards for students and the other seeking recognition and higher standards for teachers (Pipho, 1986). The National Governor’s Association also responded to *A Nation at Risk* by pushing for the adoption of higher standards of academic excellence. Bell (1988) noted how the governors urged change and pushed for new revenues to fund improvements. The Governors requested more information from the U.S. Department of Education, informing them where their states stood educationally and in comparison with each other. This request for individual state statistics caused much controversy, but led to a number of governors aggressively addressing their states' deficiencies. Timar (1989, p. 56) refers to this period of reform as being a time when an "unprecedented flood of state policies" swept American schools. State mandates on achievement, assessment, and accountability became a major focus in the first wave of educational reform.
Concurrently in 1983, the state of Texas initiated its response to *A Nation At Risk* and established the Select Committee on Public Education (SCOPE). Ross Perot, a businessman, was appointed chairman by Governor Mark White, Lieutenant Governor William Hobby, and Speaker Gibson Lewis. Sally Heynelt Cain, Southwest Regional Representative of the Department of Education, stated during an interview (Ponder & Kjelgaard, 1994b, p. 2) that it was "really the first time in my twelve years experience that I had seen a business person invited to come in and really deal with education issues." According to Toch (1991), a major education goal for Governor White was to try and raise teacher's pay, hence he needed to successfully implement tax increases. To raise taxes, he needed support of big businesses explaining Ross Perot's appointment to SCOPE. Cain continued to explain that Select Committee members, along with Chief of Staff Tom Luce, went around the state of Texas collecting information in response to *A Nation at Risk*. Testimony from teachers and administrators revealed a focus on the following themes: (a) a need to reach children educationally at an earlier age, (b) an absence of professional opportunities for teachers, (c) an inability of poor schools to meet financial needs (Toch, 1991). Glenda Barron, Texas Higher Education Coordinating Board Representative, stated that teachers expressed to Perot's Select Committee that "they were taking courses that were not really useful to them" and these courses took up a lot of credit hours (Ponder & Kjelgaard, 1994a, p. 2). Fact findings of the Select Committee also reinforced Perot's conclusion that schools were "being held hostage to extracurricular activities" (Toch, 1991, p. 78). Perot supported his conclusion with stories
about an agricultural student missing 35 days of school showing a pet chicken around the state and another student missing 42 days showing a sheep (Toch, 1991).

Perot’s campaign influenced upcoming legislative actions. SCOPE produced a final report that included 140 recommendations. Toch (1991, p. 82) commented that the recommendations were “explosive” and “reverberated throughout Texas education.” In the end, the legislature passed House Bill 72, which transformed into the omnibus Educational Opportunity Act of 1984, proceeding Governor White’s endorsement. House Bill 72 addressed many of the Select Committee’s recommendations, including: (a) an increase in state spending on education; (b) an increase in base salaries for teachers; (c) the banning of extracurricular activities from the school day; (d) the raising of a passing grade to seventy percent; (e) the enforcing of “no-pass, no-play,” barring students with non-passing grades from extracurricular activities; (f) mandating teacher tests; and (g) mandating pre-kindergarten summer programs in schools where 15 or more underprivileged or non-English-speaking four-year-olds were identified. Accreditation standards were toughened, and state aid shut off to school systems that did not measure up. Also during this 1983-84 period, legislation was passed in favor of alternative certification, career ladder advancement, and merit pay. Cain (Ponder & Kjelgaard, 1994b, p.2) stated the following:

This was 1984, and this was the mood of the legislature. We have to improve the quality of teachers, we’ve got to create avenues for professionals to get into the classrooms through alternative certification, and we have to reward excellence in the classroom. We have to challenge all the traditional systems to create a better environment.
The first wave of reform embraced standards and expectations of students and teachers. Concerns developed regarding the effectiveness of top-down mandates that had resulted from the first wave of reform efforts. Passow (1990) states that teachers were experiencing a loss of power to standardized achievement, assessment, and accountability. This first wave of standards and mandates resulted in teachers being excluded from reform efforts and blamed for the erosion of American education. This was not the intent of *A Nation At Risk* (Bell, 1993). Bell (1993, p. 593) continued by stating that “the cataclysmic change in the quality of students’ lives outside of school and the steady erosion of parental support and community interest in education made it almost impossible for schools to succeed.” Without systemwide efforts involving parents and communities, changing standards and mandating practices and procedures will not be successful (Bell, 1993). This type of thinking brought on the second wave of educational reform that recognized the crucial function of all key players present at the local level, including teachers, administrators, parents, community leaders, and businesses (Passow, 1990). A closer look at who was responsible for enacting the “regulatory swamp” (Timar, 1989, p.56) created from the first wave of reform, brought teacher education and local empowerment to the forefront of reform efforts.

The second wave of policy reform in Texas focused on teacher education programs housed in colleges of education. The Southern Region Educational Board (SREB) had been investigating teacher education in Texas and other states during the same period that Perot’s Select Committee was collecting data. In 1984, SREB published a study entitled, *A Comparison of Teacher Certification, Test Scores, and Performance Evaluation for*
Grads in Teacher Education and in Arts and Sciences in Three Southern States (Cornett, 1985). This study compared groups of arts and sciences graduates with teacher education graduates and found the arts and science majors to be just as qualified, if not possibly more qualified, than teacher education graduates in general education, general professional knowledge, and subject areas knowledge at the secondary level (Barron, 1994). The study recommended that more research was needed to draw conclusions at the elementary level. Another transcript study entitled, An Analysis of Transcripts of Teachers and Arts and Sciences’ Graduates (Galumbos, Cornett, & Spitler, 1985) examined fourteen southern states. The study analyzed the curriculum which preservice teachers were required to take during their baccalaureate program and compared this curriculum to arts and sciences graduates. Results showed that teachers took fewer hours in mathematics, science, English, and other liberal arts than did arts and science graduates, but they took more hours in the social sciences (Barron, 1994). The major conclusion from the study was to strengthen the general education component of teacher education by not having students take more courses in education than required for certification and to use the difference to take additional arts and sciences coursework (Barron, 1994). The material from these studies were made available to the SREB. Due to the information provided by these transcript studies, the SREB presented the idea that teacher education needed to be changed and defined these changes as needing fewer education hours and more content hours (Ponder & Kjelgaard, 1994a). Senator Carl Parker, a member of SREB, became involved at this stage. According to Cain (Ponder & Kjelgaard, 1994b), Parker became interested in what was happening nationally and regionally related to
teacher education. Parker had listened to the public school teachers' testimony to SCOPE and had attended national and regional meetings that emphasized the need for reform in teacher education. The SREB transcript studies compounded his concerns and "set the stage for his involvement and commitment to teacher education improvement" (Barron, 1994, p. 39).

The SREB assigned a task force to examine teacher education issues. The Task Force on Quality and Access was led by Earl Lewis, a professor from Trinity University in Texas. This committee hired Eva Galumbos to conduct a Texas transcript study in the same fashion that she had done the 14 southern states study. According to Barron (Ponder & Kjelgaard, 1994a, p. 3), the Galumbos report showed "the same thing in Texas as she had found across the fourteen southern states." According to Cain (Ponder & Kjelgaard, 1994b, p. 3), the Galumbos study resulted in a "scathing analysis of teacher education." Carl Parker, in an interview with Doyle Watts (1989, p. 313), stated that he "believed colleges of education were abusing teacher preparation programs by including redundant material in their courses, substituting education courses for courses in other fields, and requiring worthless content." Parker provided an example he found in the course catalog from the University of Texas where a course on how to use a felt board was being offered for education majors. He commented that such "Mickey Mouse education courses" were "ridiculous" (Watts, 1989, p. 312). Based on these findings, the task force recommended to reduce the number of education hours and require an academic major.
The Select Committee on Higher Education (SCHE) was organized in 1985 by Governor White, Lieutenant Governor Hobby, and House Speaker Lewis. According to Barron (Ponder & Kjelgaard, 1994a), Perot's SCOPE had recommended that it was time to have a committee representing higher education. This committee took a much closer look at teacher education and it was their recommendations, according to Cain (Ponder & Kjelgaard, 1994b), that created Senate Bill 994. This law eliminated undergraduate education degrees and set a cap of 18 credits in education courses for students preparing to become teachers. The passing SB 994 did not go uncontested.

Initial implementation took place and SB 994 had major impact on elementary teacher preparation programs. Elementary professors were concerned that limiting the number of methods courses seriously weakened their program. These academicians argued the inability to adequately prepare elementary teachers under such circumstances. Barron (Ponder & Kjelgaard, 1994a) discussed how most institutions did not have suitable bachelor of science degrees in interdisciplinary study as required by SB 994.

Consequently, these institutions had to come up with a configuration that met the demands of the law. She further stated there was a "hue and cry of unbelievable proportions from the deans of the colleges of education" (Ponder & Kjelgaard, 1994a, p. 9). Cain (Ponder & Kjelgaard, 1994b) commented that she was actually called into office at this time to listen to all the complaints and concerns. During an interview with Lynda Haynes (Kjelgaard & Ponder, 1994), she indicated that Colleges of Education were not happy. However, she did feel there were positive results from the legislative action. First of all, College of Education faculty were encouraged to completely rethink how they were
delivering instruction. Secondly, they had to start interacting with Arts and Sciences departments. Thirdly, SB 994 laid the groundwork for conceptualizing the implementation of an induction program. According to Haynes, it was Parker's vision that supported an induction year program for a first year teacher that would apply theory and application under the guidance of a mentor teacher, a university faculty member, and a principal. Even though the induction year program was not funded, the conceptual foundation was laid that later fed into the concept for developing Centers for Professional Development and Technology.

Furor over Senate Bill 994 led Senator Carl Parker into seeking answers. According to Barron (Ponder & Kjelgaard, 1994a), he had become concerned about the complaints he was receiving, especially complaints that accused he and his staff of causing students to lose financial support over the six hour student teaching requirement. Certain financial aid packages required a student to be a full time student and some programs would not allow the six hours to meet the equivalent of full time. Barron (Ponder & Kjelgaard, 1994a, p.11) stated that “...he (Parker) was very hurt that he had done something that would hurt students”. She felt that these events led Parker into considering what turned out to be HB 2885, the basis for the Centers for Professional Development and Technology. Cain (Ponder & Kjelgaard, 1994b, p.6-7) supported this view of Parker's concern and action when she stated:

Parker really wants us to do something different. The professors are still screaming and they finally have gotten to Parker and he is thinking, “What is the answer?” That is what I really appreciate about Senator Parker and that is what I appreciate about my opportunity working for him. It (SB 994) was not just a political expediency thing, it did not affect him one way or the other in his district or in his election. It was his taking seriously his responsibility as the leader of education in Texas and the
father of that bill. So we started talking about some of the things that we wanted to see in the schools - state of the art technology, classrooms of the future, etc. etc. This was the beginning of the development of the centers.

Haynes (Kjelgaard & Ponder, 1994) stated that Parker became very enamored with the idea of instruction being delivered in a different way and that he considered technology to be one avenue for solving the equity problems in Texas. She elaborated that Parker believed that distance learning facilities would make learning accessible beyond the confines of the local school district. Due to legislative action that passed allotting technology to public schools, Parker was also concerned that staff development for public school teachers would far surpass the levels of training being offered to new teachers coming out of the universities.

According to Barron (Ponder & Kjelgaard, 1994a, p.11), Parker believed that the colleges of education had been “pulled through a knothole backwards” and he believed that they had some ideas that needed to be given an opportunity to be heard. This was the beginning of the construction of the Texas Centers for Professional Development and Technology. Cain, Parker’s legislative assistant, called together a group of four people including a representative from the Higher Education Coordinating Board, two representatives from the Texas Education Agency, and herself to develop the framework for the Texas CPDTs. Barron (Ponder & Kjelgaard, 1994a, p.11) discussed how the concept of the centers crystallized:

...the idea was, that through a competitive process, we should be able to recognize certain colleges of education that want to try the support of the professional development school model that we had read about from Goodlad and others who wanted to move in that direction and really wanted to do a field-based teacher education program. What she (Cain) was advocating was linking that with professional development for inservice teachers. How can you fire up public school...
teachers, colleges of education faculty, plus the university student? And that's how
the idea for the Centers for Professional Development and Technology crystallized.

As a result of the reform efforts in teacher education as a whole, the Texas legislature
passed HB 2885, which included the language that created the Texas Centers for
Professional Development and Technology. These Centers were to be collaborative
partnerships involving school districts, universities, education service centers, and
community businesses. A planning grant phase was initiated that provided opportunity for
colleges of education and public school partners to collaboratively design a plan for
becoming a CPDT. Any committee formed within a collaborative was required to have a
governance structure of 50% field-based practitioners and 50% university members. The
collaborative nature of the CPDT statutory language was enhanced by the simultaneous
emphasis on site-based decision-making legislation. Decentralizing efforts and
empowering local school districts, along with collaborative decision-making between
schools and universities, paved the way for what is currently viewed as the third wave of
policy reform in Texas.

Restructuring teacher education using the CPDT model involves collaboratively
making decisions in regard to issues such as the preparation of effective teachers with
diverse populations, technology infusion, and simultaneous professional development for
inservice teachers and university educators. The CPDT model addresses these issues from
various angles and to provide a better understanding of such complexities, the following
embedded constructs will be discussed: (a) collaboration, (b) professional development
school movement, (c) restructured teacher education, and (d) professional staff
development.
Collaboration

Collaboration has become a major focus in restructuring efforts as evidenced in business as well as in recent educational initiatives. W. Edwards Deming, the statistician and management theorist who initiated Total Quality Management (TQM) concepts, maintains that every decision and improvement effort made within a company must be made collectively (Holt, 1993). Deming's five major principals for implementing TQM strategies include: (a) a democratic atmosphere, (b) supportive leadership, (c) team and collaborative effort, (d) a clear and unified purpose, and (e) an insistence on regular analysis and evaluation of performance data as a basis for continuous improvement (Schmoker & Wilson, 1993). Under these principles, cooperation is more essential to quality and improvement than competition.

For example, Deming's notion of "quality circles" offers a formal, yet unthreatening, setting for employees to reflect on what to do and how to solve problems (Holt, 1993). The circles are part of a team process that is self-managing and autonomous. Management provides guidance by asking the right questions, not by informing employees what to do (Schmoker & Wilson, 1993). Employees become more committed to collective goals than they do to individual ones (Csikszentmihalyi, 1990).

Peter Senge (1990), in his book entitled The Fifth Discipline, emphasizes the value of shared vision and team learning within an organization. He states that a shared vision is a vision that many people are truly committed to, because it reflects their own personal vision. A shared vision becomes intrinsic within the organization and provides what Deming refers to as "constancy of purpose" (Schmoker & Wilson, 1993, p. 390), inspiring
the focus and energy necessary for learning and continually improving. Senge (1990) further defines the concept of continuous learning as an advantage represented in team learning processes:

...all important decisions are now made in teams, either directly or through the need for teams to translate individual decisions into action. Individual learning, at some level, is irrelevant for organizational learning. Individuals learn all the time and yet there is no organizational learning. But if teams learn, they become a microcosm for learning throughout the organization. Insights gained are put into action. Skills developed can propagate to other individuals and to other teams (although there is no guarantee that they will propagate). The team’s accomplishments can set the tone and establish a standard for learning together for the larger organization (Senge, 1990, p. 236).

Such collaborative team building principles and practices have entered educational dialogue, along with other Total Quality Management constructs for continual improvement. Maeroff (1993) provides several educational examples of team building initiatives occurring across the nation. The Rockefeller Foundation created a program in 1990 through the University of New Mexico and Michigan State University that provided leadership academies to better prepare veteran teachers to teach poor and minority students. These academies were based on intense team building activities in which teachers and building principals from several schools voluntarily gathered for an extended period of time to bond and develop strategies for improvement in their schools. Maeroff (1993, p. 15) also discusses team building as “crucial” in the restructuring efforts of 12 New York City schools involved in “Schools of Tomorrow ... Today,” sponsored by the Teacher Centers Consortium of the United Federation of Teachers. Maeroff (1993) concludes that a major benefit of teams is that they form a nucleus of committed people,
avoiding the vulnerability often experienced by the lone innovator and avoiding the difficulty of attempting to change an entire staff at once.

Team building and processes for continuous improvement are part of Deming's vision for systemic change. Schmoker and Wilson (1993) provide several examples of systemic change in current school development programs, such as: (a) Comer's School Development Program, (b) Henry Levin's Accelerated Schools, and (c) Central Park East schools in East Harlem.

Comer's School Development Program emphasizes the need for collaborative relationships between the school and the community, recognizing that systemic change and ongoing improvement is dependent on these relationships. These schools involve parents and social service agencies in consensus decision-making processes that reflect Deming's PDSA (Plan, Do, Study, Act) process. Comer's staff development model reflects Deming's training, retraining, and education model.

Henry Levin's Accelerated School initiative reflects Deming's principles in the following ways: (a) Levin's six step inquiry process resembles Deming's PDSA; (b) Levin emphasizes group decision-making that represents the consensus of the whole school and leads to what Levin conceptually illuminates as "unity of purpose," which is similar to Deming's "constancy of purpose;" and (c) Levin gathers data to enable teams to continually assess and improve their school (Schmoker & Wilson, 1993, p. 393).

New York City's Park East schools are part of a choice consortium and 70% of the student population comes from the immediate East Harlem area. The policies and practices of these schools resemble Theodore Sizer's Coalition of Essential Schools and
directly relate to Deming’s principles. Their emphasis is to establish a “sense of purpose” among staff, students, and external customers (business and community members) and collaboratively focus on data for continuous improvement. The school principal, staff, and community participants examine student portfolios together and plan improvement efforts based on the portfolio assessments (Schmoker & Wilson, 1993, p.391).

The limited selection of examples presented above illustrate the parallels between restructuring efforts in education and how they resemble Deming’s principles and practices as reflected in business and industry. The current emphasis on collaboration and team building activities has led to the creation of school, community, and university partnerships. These collaborative partnerships attempt to link the world of thought and practice through consensus decision-making efforts and support current site-based management constructs. The development of Professional Development Schools, as defined by the Holmes Group (1987) and others (i.e., Goodlad, 1986, 1990; Lieberman, 1987; Levine, 1988), provide an avenue for school, university, and community collaboration.

Professional Development Schools

School reform and collaborative partnerships have emerged across the nation in response to current demands for restructuring preservice and inservice teacher education. Ideas for collaboration and teamwork between higher education and public schools are being addressed. Professional development schools (PDSs) emphasize this collaboration and have emerged from a history involving both higher education and public schools in the
preparation of preservice teachers (MacNaughton & Johns, 1993). MacNaughton and Johns (1993) discuss three antecedents to PDSs: (a) the laboratory school, (b) the triad, and (c) the centers.

John Dewey established the idea of lab schools at the University of Chicago in the late nineteenth century (Colburn, 1993). Laboratory schools were an early example of collaboration between higher education and public schools in which preservice students were assigned field experiences in lab school classrooms, generally staffed by high quality teachers and located near the university. University faculty also taught in the classrooms, conducted research, supervised preservice students, and linked what was taught in preservice coursework to what went on in the laboratory school classrooms. “John Dewey recognized that teachers needed a professional development laboratory as did scientists and medical practitioners” (Task Force on Professional Development Schools, 1996, p. 7). As enrollment in teacher education programs increased after World War II, the laboratory schools were unable to manage the large numbers. The laboratories were not found to be cost effective. They were also criticized for being unrealistic, predominantly serving university faculty children and upper middle class clientele (MacNaughton & Johns, 1993). Colburn (1993, pp.13-14) wrote:

They (lab schools) eventually were condemned for being too different from the typical public schools and too expensive for many universities to operate. Critics argued that if a lab school was radically different from the mainstream, then teachers educated at them would be unprepared for regular schools and the research generated there could not be generalized to public schools.
According to Stallings and Kowalski (cited in the Task Force on Professional Development Schools, 1996, pp. 7-8), lab schools “focused on selected students in special settings” and were “too far removed from the mainstream of school life to be credible.”

In conjunction with the concept of the laboratory school, the “portal school” concept of the 1970s provided another example of schools and universities working together to improve teacher education:

New organizational structures were set in place and planning time and personnel were provided to support university and school collaboration about preservice and inservice programs. Portal schools extended the opportunity for preservice students to have competency-based educational learning experiences which allowed them to develop and demonstrate professional skills in the filed with the guidance of professors and teachers in a real-life context (Task Force on Professional Development Schools, 1996, p. 8).

Similar to the laboratory schools, the portal schools faded. Stallings and Kowalski (cited in the Task Force on Professional Development Schools, 1996, p. 8) “speculate that the lack of evidence regarding the effectiveness of portal schools may have contributed to their shortage of funding sources and subsequent demise.”

Triad placements emerged after the decline of the laboratory schools. MacNaughton and Johns (1993) discuss this field experience model as a triad consisting of a classroom teacher that advised the university supervisor on the progress of the preservice student. The classroom teacher was somewhat included in the teacher training process. However, the level of involvement was limited and provided a limited link between theory and practice (MacNaughton and Johns, 1993).

The next evolution in preservice student field experiences evolved from the development of the center concept in which clusters of preservice students were placed in
a school, a group of schools, or a school district (MacNaughton and Johns, 1993).

Opportunities not present in the triad model included: (a) a reliable supply of preservice teachers in a school for additional professional assistance, (b) formal governance arrangements between university and school, and (c) inservice opportunities for cooperating teachers. A variety of these cluster designs emerged. For example, the University of Maryland, under the leadership of James Collins, collaborated with the Maryland school districts, teacher organizations, and State Department of Education to create a center model that emphasized the continuous professional growth of both preservice and inservice teachers. Full time center coordinators were hired to operate the center and work with university supervisors to provide an intensive (assignment to a teacher) and extensive (assignment to a school) field experience for the preservice student as well as training programs for inservice teachers. Other cluster designs, such as one example that developed at Cleveland State University, involved teaching preservice coursework at the center site (MacNaughton & Johns, 1993).

The center designs, as illustrated by the Maryland and Cleveland examples, led directly to the development of various collaborative relationships, such as the Carnegie Forums’ “clinical schools,” the RAND study’s “induction schools,” John Goodlad’s “partner schools,” and the Holmes Groups’ “professional development schools” (Harris & Harris, 1993, p. 235). These collaborative relationships of school-university partnerships emphasize the on-going efforts of principal, teachers, and university professors toward “simultaneous renewal” of the school and the university (Harris & Harris, 1993, p. 235).
MacNaughton and Johns (1993, p. 216) discuss how Goodlad's postulates and the Holmes Group concepts have extended beyond the original idea of centers and clustering. Goodlad's postulates calls for an organization called a "school of pedagogy," which consists of liberal arts faculty, college of education faculty, and public school personnel. The school of pedagogy is given flexibility to place cohorts of preservice students into year-long professional development school experiences. The students are to take part in all school life, including reform and restructuring efforts. Goodlad's underpinning is to create a bridge between theory and practice (Goodlad, 1990).

The Holmes Group (1990) supports Goodlad's postulates and emphasizes the need to develop professional development schools that support continuous learning for all participants. PDSs are similar in that they share an allegiance to the Holmes Group Principles or support Goodlad's vision for simultaneous renewal of schools and teacher preparation programs. The Holmes Group distinguishes itself from earlier center concepts by proposing to be a coalition of universities, schools of education, and public schools. Their first publication, Tomorrow's Teachers (Holmes Group, 1986), was an invitation to research institutions and teachers to join them in pursuing the following goals: (a) make teacher education more rigorous and intellectually sound; (b) recognize differences in teachers' knowledge, skills, education, certification, and work; (c) create standards for entry into teaching; (d) connect member institutions to schools; (e) make schools better places for teachers to work and learn (Bradley, 1995). Their second publication, Tomorrow's Schools: Principals for the Design of Professional Development Schools (Holmes Group, 1990), illustrates their decision to focus on professional development
schools and the report calls for PDSs to: (a) focus on teaching and learning for deep understanding for all children; (b) create learning communities of teachers, students, parents, and staff members; (c) value continuous learning on the part of everyone working with students; (d) support research conducted by teachers and professors working as partners; and (e) garner organizational support for the professional development school as a new institution (Bradley, 1995). Bradley (1995) also discusses a third report entitled, *Tomorrow’s Schools of Education*, which the Holmes Group plans to send to higher-education officials to support the following agenda: (a) make education schools accountable to the profession and the public; (b) make research, development, and demonstration of high-quality learning in real schools a primary mission of education schools; (c) strive toward higher standards in partnership with professional groups; (d) prepare educators to work together on behalf of children; (e) make education schools better places for professional study and learning; (f) correct loss of focus and program proliferation to focus on developing educators who work with young people; (g) assist state policymakers to promote rigorous standards for educators, including licensure, hiring, certification, and professional development (Bradley, 1995).

The Holmes Group reports, especially the first two, illustrate strong support for a continuum of professional development for all learners. PDSs have the potential to become staff development centers where teacher empowerment is encouraged and where inservice teachers engage in decision making processes in regard to teacher education and school reform. Preservice teachers become a part of the continuum and participate in intensive PDS internships. The Holmes Group proposals endorse a fifth year internship
program for preservice teachers (MacNaughton & Johns, 1993). These internships provide opportunity for a structured induction experience for novice teachers, guided by the supervision of a master teacher (Levine, 1988).

If you take a staff-development program that recognizes that teachers will change with the environment if the school changes and then add the notion of teacher development as a continuum that begins at the preservice level and continues to retirement, you have a PDS” (Colburn, 1993, p. 15).

Challenges emerge with any reform initiative or restructuring effort and PDSs are no exception. For example, the endorsement of site-based decision-making and local empowerment creates uniqueness, resulting in numerous site specific entities. As such individuality becomes a hallmark for PDSs, it also creates concern for educators. Teitel (1994, p.245) foresees these unique qualities as possible hindrances to institutionalization of the PDS initiatives:

The dilemma, of course, is that if such initiatives continue to live at the periphery of the organization, they fail at their overall mission. In the case of the PDS, the difficulties are doubled since it is the core of two previously separate institutions which must be infiltrated, connected and simultaneously transformed.

He continues by explaining that partnerships, such as those created in PDSs, are easier to start on the margins of the organization because they require flexible rules to allow innovations to occur. Due to this necessary flexibility, PDSs tend to be specific, varying in design from one site to another. This complicates the process of institutionalization even more. The challenge educators now are facing is connecting the PDSs into the core of institutions. “Systemic changes must be integrated with and woven into the fabric of the entire institution” (Teitel, 1994, p. 245).
To aid in the process of systemic institutionalization, Rafferty (1993) attempts to find common threads from her PDS experiences and offers a conceptual framework to guide the initial development phases for new PDSs. Rafferty (1993, p.223) suggests that PDS sites tend to adhere to the following six principles: (a) teaching and learning for understanding to create lifetime learners which may require in-depth revision of curriculum and instruction; (b) creating a learning community within the classroom and within the school that supports and sustains the ambitious kind of learning PDSs are encouraging; (c) teaching and learning for understanding for everybody’s children in order to overcome “educational and social barriers raised by an unequal society;” (d) continuing learning by teachers, teacher educators, and administrators; (e) promoting reflection and long-term inquiry into teaching and learning which is essential to the professional development of teachers, administrators, and teacher educators; and (f) inventing a new institution that will support the profound changes by creating a different kind of organizational structure that is supported over time by enduring allegiances of all stakeholders (see also Holmes, 1990).

Fountain and Evans (1994) provide additional guidance for developing common groundwork for professional development schools in their discussion of assumptions for planning, implementing, and refining project activities. These assumptions are:

...successful change initiatives depend on collaboration and shared dialogue; successful restructuring efforts of public schools and colleges of education must be situational and problem-based; successful collaboration activities depend on the extent to which they succeed in transforming independent but interrelated goals into mutually beneficial actions; the distinctive and dissimilar cultures of public schools and colleges of education require changes in the norms of interaction between these cultures, conscious efforts to create a shared culture; and a shift toward collaborative
decision making must take place for substantive change to occur in either system” (Fountain & Evans, 1994, p. 218).

Professional development schools, with their conceptualized advantages and challenges, are beginning to emerge across the nation. Due to such recent development, research on Professional Development School collaboratives is just beginning. Most of the available research is descriptive in nature, providing a series of case studies in regard to university-school partnerships. For example, Boles (1994) reviews a six-year case study of a PDS partnership, the Learning/Teaching Collaborative (L/TC), in Brookline, Massachusetts. The collaborative has grown to include nine teams of teachers in six Brookline and Boston public schools working together with two partnership colleges, Wheelock and Simmons. The framework of the L/TC consists of four main components: (a) team teaching, (b) school-university collaboration, (c) special education inclusion, and (d) alternative professional teaching time in which “each classroom teacher is provided with a minimum of one day a week (six hours) away from teaching duties to assume an alternative role -- curriculum writer, researcher, or student-teacher supervisor/college teacher.” Boles (1994) emphasizes various effects that the L/TC has had on classroom teachers. Through collegiality and team work, teacher’s responsibilities have moved beyond the walls of the classroom, breaking the old pattern of isolation and privacy. Teachers have assumed leadership roles that involve new curricular and managerial responsibilities. They have assumed an active role in preservice teacher education and, due to their increased involvement with university faculty and students, have taken on teacher/researcher interests. The experience has been empowering for the classroom
teacher. "They have seen their practice reflected back to them through the interns’ eyes, and as they assume the new mantle of teacher/researcher, they have deepened their understanding and appreciation of the value of research to practice" (Boles, 1994, p.5).

The Jacksonville AT&T Alliance for Tomorrow’s Teachers initiative, sponsored by the AT&T Foundation, was one of five national programs selected to develop a model to improve the preparation of urban teachers. The collaborative includes the University of North Florida College of Education, Clay and Duval County School Districts, the Duval Teachers United and Clay County Educational Association, and the Florida Community College of Jacksonville. Fountain and Evans (1994) define the goals of the initiative as including: (a) to restructure the university teacher preparation program so that preservice teachers demonstrate the knowledge, skills, and attitudes necessary to effect long term improvement of student achievement in urban settings; (b) to restructure three urban elementary PDSs in a way that new organizational structures and effective teaching practices are modeled and student achievement is increased; (c) to decrease the attrition rate of new teachers in urban settings; and (d) to institutionalize the practices which prove to be effective. In order to accomplish these goals, program design elements were developed for “establishing three urban professional development schools (AT&T Alliance schools); redesigning school-based and university faculty roles; using planning/study teams; developing a professional development continuum; designing and teaching nontraditional courses for professional educators; and activating an implementation team” (Fountain & Evans, 1994, p. 219).
Fountain and Evans (1994) discuss several indicators of success for the Jacksonville AT&T Alliance for Tomorrow’s Teachers project. The teacher education program has been restructured and the clinical components have been institutionalized to field-base clinical seminars and provide nontraditional internship experiences at the three urban PDSs. A cadre of teachers was selected and trained to mentor preservice teachers. Teachers also completed nontraditional graduate level coursework designed within the collaborative and beginning teachers had access to a seminar process in which they actively participated in making decisions regarding school policy and preservice teacher education content. Fountain and Evans (1994) support the success of the initiative in their analysis of data collected from project participants after the second year of implementation. University interns reported having more confidence in several teaching competencies than did non-AT&T interns. First year teachers who are AT&T graduates report feeling as confident as professional educators and many program graduates actively seek urban school assignments over suburban assignments.

The Jacksonville AT&T emphasis on restructuring teacher preparation and continuing professional development into a reconceptualized continuum has changed practice as well as preparation (Fountain & Evans, 1994). As preservice and inservice teachers shared in reflective dialogue, they both were effected. Expectations for preservice teachers changed and experienced teachers found themselves changing the way they designed and implemented learning experiences to reflect these expectations.

Indiana State University entered a partnership with four school districts (Clay Community School Corporation, South Vermillion School Corporation, Southwest Parke
Community School Corporation, and Vigo County School Corporation) to create professional development schools that: (a) use curricular, instructional, and administrative practices to ensure student learning; (b) provide professional staff development for induction and inservice teachers; (c) serve as a site for preservice professional education; and (d) supports collaborative inquiry (Williams, 1993). After one year of operation, Williams (1993) narrates several positive outcomes of this specific initiative.

Collaborative dialogue was established through a steering committee and individual site-based planning committees representing the school, university, and community. An early field experience program of intense participation for preservice students was implemented. The partnership collaboratively sought funding and received a grant providing monies for staff development support. These monies, along with university block grants and Indiana Department of Education support, aided in increasing participation in professional development opportunities, such as site visits and conference attendance:

The outcome of these efforts permitted the college students to enter the classroom ready to assume teaching responsibilities. Additionally, university faculty were afforded opportunities of increased dialogue with their colleagues in the PDS sites...Not only were they (the students) provided opportunities to observe children and youth in real school settings and to practice the craft of teaching, they also witnessed firsthand teachers assuming roles of leadership in restructuring their schools, working collaboratively with their colleagues in other schools and the university, and actively engaged in building a community of learners that reached out to families and the community (Williams, 1993, p.214).

Roberta Devlin-Scherer (1993, p. 230) discusses a professional development school model entitled “Learning to Teach in Inner City Schools and with Diverse Populations.” This model is approved by the Joint Dissemination and Review Panel in the National Diffusion Network and has been implemented in California, Texas, Washington, D.C., and
New Jersey. As with previously discussed PDSs, new roles and relationships are underlying elements of this collaborative model. For example, experienced classroom teachers are trained to mentor preservice teachers, assist in planning and teaching in preservice teacher preparation programs, and participate in ongoing professional development. University faculty become involved in school-based concerns and aid in designing training opportunities for preservice and inservice educators. Governing structures foster communication among the various players. In addition to these somewhat general PDS tenets, “The Learning to Teach in the Inner City with Diverse Populations” model has built in an accountability system that fosters self-assessment among teachers (Devlin-Scherer, 1993). Observation data are collected and recorded on each teacher by local leaders trained in the observation system, resulting in individualized profiles created by a computer program. These profiles are then discussed during teacher study groups. The teacher study groups consist of preservice and inservice teachers who also participate in a series of 12 workshops. The observations are set up on an ongoing schedule throughout the series of workshops. First and final profiles are assessed for professional growth.

The Houston Teaching Academy (HTA), a K-8 school, was the first pilot site for the "Learning to Teach in the Inner City" model. Data support significant public school student achievement gains in math, reading, and writing over a three year period (Delvin-Scherer, 1993). The HTA urban student teachers outperformed a similar group of student teachers in suburban districts in the areas of interactive teaching practices, and classroom/behavior management. After completion of the HTA program, 80% of the
student teachers chose teaching assignments in schools with diverse populations and
interviews with their respective principals indicated outstanding performance. Inservice
teachers participated in ongoing staff development, conducted sessions for other local
schools and at national conferences, and became workshop leaders for beginning teachers
on their own campus (Devlin-Scherer, 1993).

Brigham Young University and five Utah school districts (Alpine, Jordan, Nebo, Provo, and Wasatch) developed a collaborative partnership in 1984 that has been
continually functioning for over 10 years. The partnership is founded on Goodlad’s
principles for “partner schools” (Harris & Harris, 1993, p.235). Partner schools, as with
professional development schools (Holmes Group, 1986), “become facilitating
environments in which principals, teachers, and university professors work together
toward the simultaneous renewal of the school and strengthening of teacher education at
the university and in the schools” (Harris & Harris, 1993, p.235). All partnership schools
commit themselves to preservice education, inservice education, curriculum development,
and research/evaluation. Clark and Wilson (cited in Harris & Harris, 1993, p. 237)
describe the Brigham Young University Partner School initiative in a report of the
National Network for Educational Renewal as follows:

BYU’s work on Partner Schools is much more advanced than elsewhere in the
nation... In the BYU partnership we observed a number of such partner schools
functioning in a more sophisticated fashion than many of the experts are able to
describe in their imagining about what such institutions should be like.

Darling-Hammond (1994) collected a sample of emerging PDS case studies. In one
of these case studies, Miller and Silvernail (1994) describe the history and context of a
Southern Maine Partnership involving the University of Southern Maine and Wells School District. They elaborate on one professional development school, Wells Junior High School. Through collaborative efforts, the Southern Maine partnership created an Extended Teacher Education Program (ETEP) for preservice students involving a 30-credit hour graduate internship embedded in a one-year internship. The ETEP preservice program is different from previous programs because it: (a) is jointly coordinated by a university faculty member and a teacher leader, (b) consists of cohort placement of interns, (c) adheres to the K-12 school calendar, (d) actively promotes team building for the cohort group, (e) integrates theory and practice, (f) values teacher voice, (g) delivers site-based coursework, (h) shares supervision of interns between the university and school-based coordinators, and (i) promotes reflective practice.

The ETEP provides an avenue for enhanced professional development experiences for inservice teachers as well. Wells Junior High School was one of many schools in the district involved in a building-based staff development initiative, prior to the PDS model, which allowed teachers to make decisions about their own activities and budget. This early initiative supported the continuation of external consultants and disconnected workshops and did not challenge staff development content and delivery (Miller & Silvernail, 1994). The “Mastery of Learning Project” grew out of the building-based staff development model and emphasized faculty participation as consumers and implementors of research. It provided a closer look at content and delivery and the emphasis shifted from external consultants to in-house experts. Collaborative learning groups emerged, encouraging participants to use more of their own knowledge base and reflect on practice.
to solve problems. The collaborative nature and professional development experiences of the “Mastery of Learning Project” set the stage for the implementation of the Professional Development School model at Wells Junior High School (Miller & Silvernail, 1994).

Another case specific example of professional development reform is at Lark Creek Middle School, one of the professional development schools participating in the Puget Sound Professional Development School Center located in the state of Washington. Grossman (1994) describes the unique history and context of Lark Creek Middle School as a school oriented around restructured goals of Outcome-Based Education. In addition to focusing on Outcomes-Based Education (OBE), Lark Creek Middle School was also awarded the Schools for the 21st Century grant and was selected as one of four sites to participate in the Puget Sound Professional Development School Center. A dual agenda emerged: (a) to restructure in accordance with the goals of OBE, and (b) to transform into a site for “career-long professional development of teachers, with special emphasis on the preparation of preservice teachers” (Grossman, 1994, p. 50).

The preservice teacher education took on two major changes. The first change involves replacing four required university courses with a core seminar that focuses on teaching and learning in middle schools. The second change is the use of site supervisors for student teaching supervision. Site supervisors are experienced teachers, not university professors, who are nominated by the school site. Professional development of experienced teachers is also a major component of the Lark Creek Middle School PDS. Professional development experiences are enhanced to include workshops, study groups or “fireside chats,” a district-wide colloquium for middle school teachers, action research
projects, and extended dialogue with the PDS professor-in-residence at Lark Creek (Grossman, 1994, p. 58). The Puget Sound Professional Development Collaborative has created the professor-in-residence role for university faculty and the site-supervisor role for experienced teachers. Inservice teachers also have opportunities to serve as a teaching associate for the core seminar being provided for the inservice students.

Philip Schlechty was recruited to develop a plan for professional development reform in a Kentucky partnership involving Jefferson County Public Schools and the University of Louisville School of Education. Whitford (1994) takes a close-up view of this partnership by elaborating on the context of reform occurring within the Department of Secondary Education at the University of Louisville and Fairdale High School. The establishment in 1984 of the Jefferson County Public Schools Gheens Professional Development Academy, funded by the Gheens Foundation, provides a unique context of this collaborative. The Academy staff developed a comprehensive plan for creating professional development schools and continues to support professional development school restructuring in Jefferson County. The focus of restructuring in this initiative is to develop schools that are exemplars of practice and centers for the induction and continuing professional development of teachers and administrators (Whitford, 1994).

Fairdale High School in Jefferson County School District is an example of one school involved with the Gheens Academy and its restructuring efforts. PDS planning at Fairdale coincided with a formal commitment to become a member of the Sizer’s (1992) Coalition of Essential Schools. Through decentralized, building-based processes, Fairdale teachers and administrators decided to base their restructuring efforts on two major goals: (a)
exemplary practice in Fairdale High School, and (b) exemplary induction and professional
development, including links to teacher education. Their efforts resulted in the
development of interdisciplinary teams with primary focus on exemplary practices for
Fairdale High School. Teacher education restructuring has not emerged as a major tenet;
however, university connections have occurred in a variety of ways that are viewed as
being coincidental as well as independent of PDS efforts. For example, the Department of
Secondary Education at the University of Louisville placed regular program courses at
Fairdale and the university faculty co-taught these courses with high school teachers.
Also, a program providing year-long employment of university students was implemented
at Fairdale, bringing teacher educators into the building. Professional development events
were interwoven with Fairdale’s restructuring efforts and involved university assistance as
well as other external facilitators and in-house expertise. Professional development events
evolved around interdisciplinary teaming, professional readings and conversation, and
learning-by-doing approaches (Whitford, 1994).

Snyder (1994) describes the collaborative efforts of participants from Teachers
College of Columbia University, two schools within New York City’s Community School
District Three, and the United Federation of Teachers, to restructure schools and create
professional development schools. The goals of the initiative were to alter the nature of
preservice and induction year experiences, change the ongoing professional development
of school and college educators, improve the relationship between the college and the
schools, and enhance the “caliber and use of educational research” (Snyder, 1994, p.98).
A secondary and elementary model for preservice teacher preparation emerged, implementing a two-year graduate program.

Two semesters of student teaching occurred during the first year and student teachers were eligible for a teacher certification but were not eligible to receive their master's degree until completion of the second year, teacher-intern experience. The interns became teacher employees the third year and were provided mentoring by the teachers they were paired with during the teacher-intern year. Synder (1994, p. 107) elaborates that one major outcome of this collaborative initiative was changes made in the induction of beginning teachers, with the internship year providing “a guided entry for inexperienced teachers with the requisite professional and emotional support for interns to grow into their potential by building on their strengths.” Preservice education was also changed by increasing field-based experiences and student teaching time, improving the conceptual connection between university-based theory and school-based practices. Another outcome involved the professional growth and development of experienced teachers as they learned about working together in teacher teams intertwined with graduate student teams in interdisciplinary teaching methods. University-based educators found professional growth by increasing their involvement in the practical wisdom of the school environment (Snyder, 1994).

In analyzing the professional development school models described, a series of common threads emerged in regard to the collaborative effort between the participating universities and schools to restructure preservice and inservice professional development programs. These common threads include: (a) the expansion of field-based experiences
for preservice teachers, (b) restructuring of university coursework for preservice teachers, (c) creation of new roles and responsibilities for inservice teachers, (d) enhancement of professional development opportunities for inservice teachers, and (e) emphasis on reflective practice opportunities for inservice teachers. The following sections elaborate on the common threads as well as provide a brief historical background for better understanding of the changes that have occurred in preservice and inservice teacher education due to restructuring efforts.

Preservice Teacher Education

Farris and Smith (1993) provide a brief overview of the history of teacher education and how specific historical events led to the creation of PDSs as defined by the Holmes Group Consortium (1986) and others (e.g., Goodlad, 1986, 1990; Leiberman, 1987; Levine, 1988). In the 1820s, Horace Mann initiated the first attempt at professionalizing teaching by creating "normal schools" which were two-year institutions designed solely for teacher preparation. By the 1900s, these normal schools had been converted into four-year teacher education colleges. By the mid 1960s and 1970s, these colleges were transformed into comprehensive universities, "typically denying their origins" as teacher preparatory institutions and due to this university expansion, "teacher preparatory programs have become neglected in terms of prestige and fiscal support" (Farris & Smith, 1993, p. 261).

As enrollment in teacher education programs peaked in the early 1970s, and teacher education faculties increased to accommodate the student populations, teacher educators
found their powerbase increasing on university campuses. Simultaneously, K-12 schools were reporting poor test scores across the nation (Farris & Smith, 1993). The release of *A Nation at Risk* in 1983 initiated a chain of reports and events criticizing American education and urging reform. It was the culmination of these events that led to the creation of the Holmes Group (1986) and the Carnegie Forum (1986), both entities pursuing new ways for school-university reform (Farris & Smith, 1993). Prior school-university reform efforts, such as the laboratory school, the portal school, and the triad design, had died out by the 1980s. Winitzky, Stoddart, and O'Keefe (1992) offer possible reasons for the failure of these earlier attempts, including: (a) the lack of evaluation and systematic research and development; (b) lack of involvement due to top-down designs; and (c) too narrow of a focus in which the locus of change was isolated with the classroom teacher and was not systemically geared toward the school and the university. The notion of school-university partnerships that was revived in the 1980s, such as that supported by the Holmes Group (1986), takes on a systemic view toward reform:

Critical to the Holmes reform agenda and the PDS idea is a systems view of education. A program of teacher education cannot be excellent without an excellent school in which to place student teachers. A school cannot be excellent without teachers graduated from excellent programs. To improve one part of the system, one must improve all of it...that is, the locus of reform has broadened to include the educational system, not just the individual classroom teacher (Winitzky, Stoddart, & O'Keefe, 1992, p. 5).

The 1990s provide numerous case studies depicting how the systemic view of the Holmes Group has transformed teacher education programs across the nation. The previously discussed case studies on school-university partnerships illuminate the expansion of field-based experiences for preservice teachers as being the major
fundamental change evolving due to restructuring efforts. Jacksonville's AT&T Alliance for Tomorrow's Teacher initiative has institutionalized field-based clinical seminars for preservice teachers and offers nontraditional internship experiences in urban settings (Fountain & Evans, 1994). The Indiana State University collaborative has implemented an early field-based experience component that is more intense (Williams, 1993). An Extended Teacher Education Program (ETEP) involving a 30 credit hour graduate internship has been developed in the Southern Maine partnership allowing a cohort of interns to work together in a school setting (Miller & Silvernail, 1994). Fairdale High School in Jefferson County, Kentucky, provides a year-long program that employs university students in the schools (Whitford, 1994). The Teachers College of Columbia University collaborative created a field-based, two-year graduate program offering a master's degree and resulting in interns being hired as employees the third year (Synder, 1994).

The expansion of field-based experiences also involved restructuring of university coursework. For example, in the Southern Maine collaborative, all graduate courses are delivered on site and co-taught by university and school faculty members (Miller & Silvernail, 1994). The Lark Creek Middle School PDS has implemented a core seminar that focuses on teaching and learning in middle schools, replacing four traditionally required university courses (Grossman, 1994). The field-based clinical seminars in the Jacksonville AT&T initiative are defined as providing "nontraditional" internship experiences (Fountain & Evans, 1994, p. 221).
Due to the expansion of field-based experiences, two patterns of perceived effects emerge from this discussion on restructuring efforts in preservice teacher education. The first pattern of effects illuminate the enhanced professional development of preservice teachers. The Jacksonville AT&T initiative reports university interns as having more confidence in several teaching competencies than did non-AT&T interns (Fountain & Drummond, 1993). Williams (1993) reports that interns involved in the Indiana State University partnership were provided opportunities not only to practice the craft of teaching, but also to witness teachers assuming leadership roles in restructuring efforts. The Houston Teaching Academy reports that urban student teachers participating in their PDS model outperformed a similar group of non-PDS students in suburban districts in the areas of interactive teaching practices, and classroom/behavior management (Devlin-Scherer, 1993). The Teachers College of Columbia University collaborative reports that preservice education was changed by increasing field-based experiences and student teaching time; improving the conceptual connections between university-based theory and school-based practices (Snyder, 1994).

The second perceived pattern of effects that appear to be emerging from restructuring efforts in preservice teacher education relate to increased success as experienced by induction year teachers. First year teachers that graduate from the Jacksonville AT&T program report feeling as confident as professional educators and are actively seeking employment in urban school districts (Fountain & Drummon, 1993). Williams (1993, p. 214) states that due to restructuring efforts in the Indiana State University program, university students “enter the classroom ready to assume teaching responsibilities.” The
Houston Teaching Academy reports that after completion of the HTA program, 80% of the student teachers chose teaching assignments in urban settings and interviews with their respective principals indicated outstanding performance (Devlin-Scherer, 1993). Snyder (1994, p. 107) indicates that the internship year as implemented through the Teachers College of Columbia University program provides "a guided entry for inexperienced teachers with the requisite professional and emotional support for interns to grow into their potential by building on their strengths."

In summary, the PDS movement is influencing preservice teacher education across the nation. Preservice teacher education programs are expanding field-based experiences for preservice teachers and restructuring university coursework to reflect the PDS environment. Preservice teachers participating in PDS teacher education programs are showing enhanced professional development and increased success during induction year experiences.

School-university partnerships have also had an impact on inservice teacher education. The following section discusses these changes and provides an historical framework of how professional development for experienced teachers has evolved.

Inservice Teacher Education

Knowledge of teacher development has gone through various growth spurts, with rapid growth beginning in the early 1970s. Roots of teacher development can be traced back to concerns that grew out of the numerous federally funded curriculum projects that came into existence after the 1957 Sputnik event shocked Americans into believing that
Soviet science and education were superior. After the National Defense Education Act was passed in 1958 and in 1959, numerous curriculum projects were federally supported. These curriculum projects consisted of “teacher proof” curriculum guides, created by experts and intended to produce higher standards and increase student achievement. Staff development efforts related to these programs involved heavy emphasis on program adoption. Training sessions primarily were based on teaching the content of the innovation. Experts assumed that teachers would be able to teach the curriculum sequences as intended. Such intention became identified as the “fidelity perspective” (Fullan and Pomfret, 1977, p.340).

From 1973 to 1978, these federally funded programs underwent intense scrutiny when the RAND corporation conducted, under the sponsorship of the United States Office of Education, a national study of the programs as adopted by various public schools. RAND’s four-year, two-phase study examined a sample of 293 local projects funded by four federal programs: (a) Title III of the Elementary and Secondary Education Act (ESEA), (b) Title VII of ESEA, (c) innovative programs funded by the 1968 Vocational Education Act, and (d) Right-to-Read (McLaughlin, 1991). A summary analysis of the study as found in Berman and McLaughlin (1978), basically supported that teacher implementation of specific innovations was not occurring as the experts intended, and therefore, not supportive of the fidelity perspective. RAND researchers concluded that most educational innovations require users to work out their own specific adaptations through a mutually adaptive process between the user and the setting. Implementation of innovations was found to be dependent on the interdependent behaviors of teachers and
students (Berman & McLaughlin, 1978). "Despite highly formalized and heavily structured plans, teachers adapt, rather than adopt, curriculum proposals" (Doyle & Ponder, 1977, p.75). It was the landmark RAND study that gave rise to rapid changes in the knowledge constructs about professional development in the 1970s.

Instead of focusing on the innovation and its adoption, staff development programs began emphasizing more attention to the individual teacher. The RAND study identified four broad factors as crucial to the successful implementation and continuation of change efforts and to staff development activities (McLaughlin, 1991): (a) institutional motivation had implications for teachers' commitment and willingness to implement, (b) project implementation strategies and staff development strategies for implementation had critical consequences for the outcomes of the change effort, (c) institutional leadership proved to be an important element for successful implementation and continuation of the project, and (d) the attitudes, abilities, and experiences of the individual teacher had a major influence on outcomes. All of these factors connect teacher development to successful implementation of innovations.

Effective implementation consists of alterations in curriculum materials, instructional practices and behavior, and beliefs and understandings on the part of teachers involved (Fullan & Hargreaves, 1991). Several large-scale studies support the conclusion that teacher development is closely related to successful change and implementation (Huberman & Miles, 1984; Stallings, 1989; Joyce & Showers, 1988). Huberman and Miles (1984) found that change-bearing innovations lived or died depending on the amount and quality of assistance that their users received once the change process was
under way. Stalling's studies (1989) demonstrated that teachers changed their behaviors by trying the innovation, evaluating and modifying the innovation, and trying the innovation again. Joyce and Shower's (1988) well-known theory-demonstration-practice-feedback-coaching model illustrates a teacher development process that results in successful implementation.

The RAND studies gave rise to a new understanding of teaching and learning that focused attention on teacher characteristics and teacher-student interdependencies. Process-product research (e.g., Rosenshine & Furst, 1973) that related specific teaching behaviors to specific student achievement measures moved to a broader scope including more variety and complexity:

Research on teaching has shifted from focus on isolated pedagogical behavior to consider the teaching process in terms of relationships between content and pedagogy and to examine student-teacher interactions. Current notions of good teaching and effective achievement consequently are much more complex and differ in important respects from past, simpler conceptualizations (McLaughlin, 1991, p. 68).

The scope broadens even more when considering that implementation of single innovations is a rarity (Fullan & Hargreaves, 1992). Educators tend to focus on the effects of specific innovations without looking at the wider context of teacher, school, and district. Fullan (1991) reminds readers that schools are in the business of managing multiple innovations simultaneously.

As the 1980s set the stage for the implementation of multiple innovations, the 1990s is faced with the challenge of understanding chaos and gaining comprehensive perspectives. Fullan (1991) advocates systemic reform efforts for mapping and carrying out such comprehensive change. As social and cultural complexities of changing schools
and the knowledge of professional development continue to expand in the 1990s, organizational development and professional development need to share space and be balanced with each other in order to enhance the ecology of the entire educational system (Bertani & Tafel, 1989). The realities of teaching are moving beyond the single classroom walls. A more comprehensive framework is needed to understand teacher development in such complex contexts (Fullan & Hargreaves, 1991). Fullan and Hargreaves (1991) suggest a comprehensive framework for teacher development that includes four main elements: (a) the teacher’s purpose, (b) the teacher as a person, (c) the real world context in which the teachers work, and (d) the culture of teaching. Complexities of teacher development depends on both individual and collaborative support. Studies conducted by Little (1986) and Rosenholtz (1989) emphasize the need for collegiality in support of the emerging view that teaching is collaborative work. Team work, shared decision-making, site-based management, action research, and other recent reform topics help identify the collaborative era of the 1990s.

Professional development programs in the 1990s are one avenue being actively pursued for restructuring the educational systems in our country. One change has emerged simply with terminology. “Staff development reflected the language of the 1970s; professional development captures better the objectives and conceptualizations of the 1990s” (McLaughlin, 1991, p. 80). Professional development encompasses the growth of all learners, better reflecting the collaborative nature of current change efforts.

Guskey (1992) describes the effectiveness of professional development in the 1990s through five guidelines that stem from factors that research indicates to be directly related
to program success: (a) recognize that change is an individual process and that professional development activities must be focused on the individuals involved (see also Hall & Loucks, 1978); (b) think big and start small, recognizing that professional development programs that are successful are those that approach change in a gradual and incremental fashion; (c) work in teams, promoting collegial interaction and acknowledging the naturally occurring relationships among professionals (see also Fullan, Bennet, & Rolheiser-Bennet, 1989; Little, 1982); (d) include procedures for personal feedback on results to reinforce successful actions and diminish unsuccessful ones; and (e) provide continued support and follow-up (see also Berman & McLaughlin, 1978; Joyce & Showers, 1980; Sparks & Loucks-Horsley, 1989).

Sparks and Loucks-Horsley (1989, p. 97) provide descriptions of professional development models that theory and research support as being effective. They continue to use the term staff development and define it as "those processes that improve the job-related knowledge, skills, or attitudes of school employees." Sparks and Loucks-Horsley (1989) describe five models of staff development, including: (a) individually-guided staff development, (b) observation/assessment, (c) involvement in a development and/or improvement process, (d) training, and (e) inquiry.

Individually-guided staff development assumes that individuals are self-motivated, especially when they select their own learning goals. This model is supported by adult learning theories (Knowles, 1980), age/stage theories (Levine, 1989; Loevinger, 1976; Levinson, 1986; Oja, 1991), and learning style theorists (e.g., Kiersey & Bates, 1984; Kolb, Rubin, & McIntyre, 1984; Gregorc, 1979) who argue for individualization.
The Concerns-Based Adoption Model (Hall & Loucks, 1978) indicates that individual concerns change as a teacher learns new behaviors and practices new methods; therefore, different types of staff development are required for effective implementation. An individual teacher may be implementing an innovation at any of the following levels of use: (a) orientation, (b) preparation, (c) mechanical use, (d) routine use, (e) refinement, (f) integration, (g) integration, and (h) renewal. Guskey (1994, p. 44) supports the need to invest in the individual process of professional development of implementors. However, he also elaborates on finding the “optimal mix” that recognizes the implementation of innovations as being both an individual and organizational process. Understanding the interpersonal dynamics of the individual and the culture of the surrounding context in the organization are interwoven concepts. McLaughlin (1990) states that effective implementation of change directs attention not only at the macro-level decisions of policymakers and administrators, but also at micro-level realities that involve the daily actions and choices of individual implementors.

The observation/assessment model encompasses a variety of evaluative methods that involve reflection and analysis as a central avenue for professional development. Joyce and Showers (1982) suggest a peer coaching model and their research (Joyce & Showers, 1988) has shown gains in student learning when the training of teachers in instructional practices is followed up with peer observations and coaching. Sparks (1986) found peer coaching more successful in improving classroom performance than consultant coaching or workshop-only coaching methods. Teacher evaluation and clinical supervision approaches are also types of observation/assessment models.
The involvement in a development/improvement process model of staff development assumes that teachers are more likely to implement an innovation if they are directly involved in the developmental process of the innovation. Knowles (1980) suggested that adults learn most effectively when they have a need to know or solve a problem. Glickman (1986) supports that teachers need to know planning processes as well as content. Wood, Thompson, and Russel (1981) developed a five-stage model of staff development entitled RPTIM (Readiness, Planning, Training, Implementation, and Maintenance) which provides a framework for involving teachers in the developmental process.

Training models of staff development may be one of the most efficient ways for training large numbers of teachers. Training models have been well researched, indicating the potential for altering teachers' knowledge, skills, and attitudes (Sparks, 1989). Gage (1984) found inservice education effective in changing teachers and improving student achievement, attitude, and/or behavior. Joyce and Showers (1988) support that effective training components include theory, demonstration, practice, feedback, and coaching if gains in knowledge and skills are to transfer into the classroom. One-shot training sessions are considered ineffective (Joyce, Showers, & Sparks, 1983).

Inquiry models of staff development involve the process of teachers formulating their own questions and collecting their own data to answer them. Action research and teacher-as-researcher are two common terms used in inquiry models. Action research by teams of teachers is viewed as an effective means for promoting professional growth school improvement by many researchers (e.g., Simmons and Sparks, 1985; Glickman,
1986; and Glatthorn, 1987). Loucks-Horsley, et al. (1987) discuss the teacher-as-researcher concept as a bridge between research and practice. Lieberman and Miller (1984) report that teachers and administrators learned to address school-wide problems collaboratively by using methods of teacher inquiry, including: (a) working together to define the problem, (b) learning each other's perspectives, (c) gathering evidence, and (d) formulating solutions.

Guskey's guidelines for professional development and Sparks and Loucks-Horsley's models of staff development have provided a background for discussing current professional development programs that are emerging from Professional Development School (PDS) initiatives across the nation. Although a primary focus of PDSs tends to fall on preservice education, professional development of inservice teachers is emerging as a major tenet as well. In reviewing the PDS case studies discussed earlier, common threads experienced by participating inservice teachers tend to fall into the three following categories: (a) new leadership roles and responsibilities, (b) enhanced staff development and training, and (c) reflective practice opportunities.

New leadership roles and responsibilities involved cooperative teaching, site supervision, university course delivery, and action research. For example, in the Puget Sound Professional Development School collaborative, the public school teachers had the opportunity to become teaching associates, clinically appointed by the University of Washington (Grossman, 1994). Experienced teachers co-taught with university faculty in the Gheens Academy project (Whitford, 1994). Teachers in the Manhattan schools and Columbia University collaborative became involved in teacher research (Snyder, 1994).
The Learning/Teaching Collaborative in Massachusetts provided alternate teaching time for teachers to assume the role of curriculum writer, researcher, or student-teacher supervisor/college teacher (Boles, 1994). A cadre of teachers was selected and trained to mentor preservice teachers and assist in teacher preparation programs in the Jacksonville AT&T Alliance project (Fountain & Evans, 1994). The National Diffusion Network model (Roberta Devlin-Scherer, 1993) that was piloted in the Houston Teaching Academy reports that inservice teachers are conducting staff development sessions for neighboring schools and at national conferences, and they are workshop leaders for beginning teachers on their own campus. All of the centers had enhanced the roles and responsibilities of inservice teachers in some sense. Recurring themes indicated that teachers experience empowerment with their new roles and responsibilities. Recurring themes also indicate that teachers feel increased value regarding their input. For example, Miller and Silvernail (1994, p.38) report the following about Wells Junior High PDS in the Southern Maine partnership:

Integration of theory and practice goes beyond combining academic coursework and field experiences. In general, teacher’s voices have been uninvited, unheard, and devalued in professional discourse about teacher education. The Wells PDS makes teacher voice central to its preservice program and acknowledges the unique perspectives, insights, and wisdom that practicing teachers have accumulated and incorporates these into the preservice program. Through on-going, daily discussion, story telling, and reflective interaction, experienced teachers talk about the tacit understandings and informal rules of practice that underpin their knowledge of the teaching craft. Through continuous conversation in the context of real schools and classrooms, teacher voice assumes a privileged authority and often challenges the more formal knowledge base that university professors represent.

Staff development and training involved a series of workshops that evolved as professional development needs emerged. The University of Southern Maine
collaborative discussed enhanced training for cooperating teachers and supervision (Miller & Silvernail, 1994). The Puget Sound Collaborative listed a series of workshop delivery models including peer coaching, site-based decision-making, supervision, and action research (Grossman, 1994). Teachers involved in the Jacksonville AT&T Alliance project completed nontraditional graduate level coursework designed within the collaborative and induction year teachers had access to a seminar process that included them in school decision-making. Several of the case studies indicated the use of inservice team work for professional development, such as team teaching in the Learning/Teaching Collaborative (Boles, 1994), planning/study teams in the Jacksonville AT&T Alliance project (Fountain & Evans, 1994), teacher study groups consisting of preservice and inservice teachers in the Houston Teaching Academy (Delvin-Scherer, 1993), collaborative learning groups in the Southern Maine partnership (Miller & Silvernail, 1994), “fireside chats” in the Lark Creek Middle School PDS of the Puget Sound PDS Center (Grossman, 1994), and the interdisciplinary teacher/graduate student teaching teams as found in the secondary model of the Teachers College of Columbia University Partnership (Snyder, 1994).

Nested in staff development opportunities were various models for reflective practice. The Mastery of Learning project in the Southern Maine collaborative elaborated on “using the knowledge base” by providing days for the teachers to review research and participate in critical discussions and reflection (Miller and Silvernail, 1994). The Puget Sound program developed study groups and held “fireside chats” for reflection (Grossman, 1994). The Gheens Academy provided opportunity for professional reading and conversation (Whitford, 1994). The Columbia University collaborative developed
interdisciplinary and school/college teaching teams that participated in in-depth reflection on practice (Snyder, 1994). The Houston Teaching Academy implemented an accountability system that fosters self-assessment among teachers (Devlin-Scherer, 1993).

In summary, the PDS movement is influencing the professional development of inservice teachers. Recurring themes are emerging in PDSs across the nation, such as: (a) inservice teachers are assuming new roles and responsibilities involving cooperative teaching, site supervision, university course delivery, and action research; (b) inservice teachers are experiencing increased value in “teacher voice;” (c) inservice teachers are experiencing enhanced professional development opportunities that evolve simultaneously with professional development needs embedded in implementing PDS programs; and (d) inservice teachers are experiencing increased opportunities to reflect on their own practice.

Conclusion

As the literature reviewed indicates, the Professional Development School model illuminates various professional development components. A major component involves teamwork between university faculty and inservice teachers to expand field-based experiences of preservice teachers and restructure preservice university coursework to reflect field-based environments. These collaborative efforts are resulting in unique experiences and increased responsibilities for inservice teachers. Teachers are providing more input into teacher preparation programs and they are experiencing increased value regarding their input. Teachers are also experiencing enhanced professional development
opportunities necessary to meet the demands of PDS programs. For example, the case studies indicated that inservice teachers attend various workshops, professional conferences, and visit exemplar PDS sites. The type of professional development activities that the teachers attend depends on site-specific needs and demands. Also, due to increased involvement with university students and coursework, inservice teachers are experiencing increased opportunities to reflect on their own practice.

The literature review has provided a framework of PDSs and professional development components. The purpose of this research is to identify and describe professional development components as experienced by participants in the Texas Centers for Professional Development and Technology (CPDT).
CHAPTER III

PROCEDURES FOR DATA COLLECTION AND ANALYSIS

The primary objective of this study was to describe and analyze three major components of professional development as experienced within the Texas Centers for Professional Development and Technology (CPDTs). The three components were: (a) visions of professional development reform; (b) the patterns of enacted professional development models; and (c) the effects of these models as understood by policymakers, implementors, and practitioners. Three matching research questions were posed addressing: (a) the unique aspects of vision for professional development in the Texas CPDTs, (b) the unique patterns of enacted professional development in the Texas CPDTs, and (c) the unique effects of professional development programs on target groups in the Texas CPDTs. A second objective of this study was to extend the data to inferred implications for current professional development efforts.

I conducted this study using qualitative research methods. Qualitative constructs allowed me to describe models of professional development as they naturally occurred in the Texas Centers for Professional Development and Technology. Qualitative procedures, such as interviews, observations, and document analysis, illuminated the naturally occurring cycle of events from the participants' frame of reference (Patton, 1987; Bogdan & Bicklen, 1992). "The fundamental principle of qualitative interviewing is to provide a
framework within which respondents can express their own understandings in their own terms” (Patton, 1987, p. 115). Gathering data in natural settings allowed reality-based contexts to be applied to the information. This naturalistic profile is supported in ethnographic approaches which emphasize the description of local particularities and focus on individuals’ perspectives and interpretations of their world (Miles & Huberman, 1994). “Thick descriptions” are produced in qualitative research that have the potential to reveal complexity as well as provide a vivid “ring of truth that has strong impact...” (Miles & Huberman, 1994, p. 10).

Qualitative methods allowed me to study selected issues pertaining to the Texas CPDTs in depth and detail. By not being constrained to predetermined categories, I was able to allow the perceptions and experiences of the participants to direct the nature of the study in an iterative manner. Since it is the people involved in the Texas CPDTs who live within the changes of the professional development movement, it is their definitions that I used. Due to my interest in the process of professional development within these centers, I was more interested in recurrent interactions than outcomes or products. Bogdan and Biklen (1992) describe this process oriented research through the lens of grounded theory, in which theory emerges from the bottom up. Through inductive data analysis, abstractions are built as the particulars are gathered and grouped. Salomon (1991) identifies this process as a systemic approach that leads to understanding the interaction of variables and contrasts it with an analytic approach that focuses on understanding a few controlled variables.
Procedures for Collection of Data

Wolcott (1982, p. 157) states there is merit in open-minded and inductive search for questions and answers, but he also states that it is “impossible to embark upon research without some idea of what one is looking for and foolish not to make that quest explicit.” Due to the complexities of my multiple case study, I had to determine with caution the degree of “looseness” versus “tightness” (Miles & Huberman, 1994) in my research design:

…the looser the initial framework, the more the researcher can be receptive to local idiosyncrasies, but cross-case comparability will be hard to get, and the costs and the information load will be colossal. Tightly coordinated designs face the opposite dilemma: They yield more economical, comparable, and potentially generalizable findings, but they are less case-sensitive and may entail bending data out of contextual shape to answer a cross-case analytic question (Miles & Huberman, 1994, p. 17-18).

I chose to avoid the extremes. Consequently, at the onset of my study, I designed a set of general questions and a conceptual framework, developed initial data gathering devices, and determined some notion of sampling. This rudimentary design provided me with enough structure to stay focused, but did not confine me to predetermined categories and subsets.

Formulating Questions and Designing Conceptual Framework

After the initial task of defining the problem and significance of this study, I formulated general research questions. The research questions focused on three major themes: the vision, enactment, and effects of professional development as experienced and perceived in the Texas CPDTs. From these themes, I originally designed the following six
questions, which were modified to three general questions after the pilot study (see page 85):

1. What are patterns of “vision” of professional development reform held by policymakers, policy implementors, and practitioners in the Texas CPDTs?

2. In what ways are these “visions” perceived as being the same or different from non-CPDT schools and universities?

3. What are the patterns of professional staff development as enacted in Texas CPDTs?

4. How are these patterns of enactment perceived as being the same or different from non-CPDT schools and universities?

5. What are the effects of professional staff development programs on target groups in the Texas CPDTs (teachers, university faculty, interns, and students in the schools)?

6. How are the effects perceived as being the same or different from non-CPDT schools and universities?

After I designed the research questions, I determined common themes, common constructs, and implicit or explicit relationships from the questions and mapped out a conceptual framework joining all the pieces into an ongoing process of data collection and data analysis. As my conceptual framework indicated, raw data were to be collected on individual CPDT sites in the form of individual interviews, focus group interviews, documentation, and fieldnotes. These raw data were then to be iteratively analyzed for patterns of vision, enactment, and effect. Identified patterns were to be compared across the various CPDT sites. The conceptual framework aided me in deciding which
relationships were most meaningful and provided insight and focus for my upcoming data collection and analysis.

**Instrumentation**

A non-structured, focused, in-depth interview was used to collect data for this study. I chose this type of interview design because of the naturalistic quality and pluralistic nature of my study. Guba and Lincoln (1981) state that in order to understand a pluralistic set of values held by various respondents, it is necessary to ground inquiry in the multiple perspectives and multiple realities of these persons. Unlike standardized instruments that assume consensus, a non-structured, focused interview allows multiple views to arise as respondents express them (Guba & Lincoln, 1981). “The fundamental principle of qualitative interviewing is to provide a framework within which respondents can express their own understandings in their own terms” (Patton, 1987, p.115).

The interview method was used with individuals and focus groups. The object of the focus group interview was to gather high-quality data in a social context where participants consider their own views in the context of the views of others (Patton, 1990). This technique was selected for a variety of reasons. According to Krueger (1994), one of the intents of focus groups is to interview the participants in natural, real-life setting. This concept matched the natural inquiry approach to my study. Focus groups also were an efficient way to collect data because it provided a way to interview more people in less time (Patton, 1990; Krueger, 1994). This allowed me to increase my sample size significantly. Focus groups also provided quality control in my data collection. Participants listened to each other and provided “checks and balances” on each other,
weeding out false or extreme views (Patton, 1990, p. 336). Krueger (1994) elaborates that because people are social creatures, they interact with others and are influenced by the comments of others. This interaction among group participants has the potential to exhibit a synergy that individual interviews alone can not achieve. “Focus groups possess the capacity to become more than the sum of their participants” (Krueger, 1994). Of course, this level of interaction also has the potential to detour the focus of the interview. The interviewer has less control in a group interview than in an individual interview and needs to keep the discussion focused (Krueger, 1994). I designed an interview guide (Appendix B) to aid in this process.

For purposes of this study, I used a general interview guide approach which involves outlining in advance a set of issues that directly relate to my research questions. The interview guide served as a checklist and was used to ensure that the same basic information was being obtained from each respondent. Due to the various individual and group interviews designed to occur in this study, the interview guide was a valuable tool in helping to keep the interactions focused while still allowing individual perspectives and experiences to emerge. Patton (1990) suggests that the interview guide approach is especially useful in conducting group interviews because of this intended focus of interactions.

The interview guide was developed with a series of general open-ended questions and a checklist of optional probes. This format allowed me ample opportunity to probe for clarification and ask questions appropriate to the respondent’s knowledge, involvement, and status (Merriam, 1988). I was able to adapt both the wording and the sequence of
questions as necessary to match the context of the actual interview (Patton, 1990). The open-ended questions provided me with a focus, but because of the non-structured approach, flexibility and spontaneity were not reduced. Kahn and Cannell (1964) described such in-depth interviewing as having a conversation with a purpose. According to Patton (1990), good qualitative inquiry questions should be open-ended, neutral, singular, and clear. Six general questions that met this criteria were used during each pilot interview session (Appendix B). After the pilot study was completed, the original six questions were modified to three general questions with a set of optional probes accompanying each theme (Appendix B).

**Defining the Case**

While synthesizing my research questions and conceptual framework into the interview guide, I began to define the boundaries of my study and determine the unit of analysis. My research questions identified the Texas Centers for Professional Development and Technology (CPDTs) as the global focus, defining the unit of analysis in spatial terms extending across the entire state. At the time the design was being developed there were 17 CPDTs in the state of Texas, defining the unit of analysis as having multiple cases with various social and physical settings. Miles and Huberman (1994, p. 26) support multiple case studies, stating that "they offer the researcher an even deeper understanding of processes and outcomes of cases, the chance to test (not just develop) hypotheses, and a good picture of locally grounded causality." Multiple case sampling adds confidence to findings (Miles & Huberman, 1994):

By looking at a range of similar and contrasting cases, we can understand a single-case finding, grounding it by specifying how and where and, if possible, why it carries
on as it does. We can strengthen the precision, the validity, and the stability of the finding... If a finding holds in one setting and, given its profile, also holds in a comparable setting but does not in a contrasting case, the finding is more robust (p. 29).

However, due to the complexities and conceptual nature of dealing with 17 Texas CPDT sites, another layer of sampling procedures were crucial for setting additional boundaries and preventing an unwieldy collection of data in this study. “You can not study everyone everywhere doing everything” (Miles & Huberman, 1994, p. 27).

**Sampling**

I followed a technique for sampling which Patton (1990, p. 169) describes as “purposeful sampling.” Miles and Huberman (1994, p. 27) support that qualitative samples tend to be purposive rather than random, “partly because the initial definition of the universe is more limited.... and partly because social processes have a logic and a coherence that random sampling can reduce to uninterpretable sawdust.” Random sampling of small samples typical in qualitative designs also has the tendency to lead to biased interpretations (Miles & Huberman, 1994). For purposes of my study, a small sample of great diversity was selected for data collection and analysis to yield two kinds of findings: (a) high-quality, detailed descriptions of each case, which are useful for documenting uniqueness, and (b) important shared patterns that cut across cases and derive their significance from having emerged out of heterogeneity (Patton, 1990).

With input from my major professor and committee members, I selected the first eight Texas CPDTs to be funded by the state of Texas as my sample. These eight CPDTs were selected for important reasons. They represented a complete set of cases from the initial
1992-93 year of CPDT implementation in Texas. Of the 17 CPDTs, these initial eight had the longest history of implementation in the state, therefore they were perceived as providing information-rich cases that would best illuminate the purpose of the study. A list of the eight Texas CPDTs comprising the sample for this study is found in Appendix A.

The key informants that were selected for this study were 83 individuals with demonstrated participation in one of the eight Texas CPDTs selected as the sample. They were selected from a pool of participants who were involved in creating and implementing Center concepts in the following capacities: (a) individuals who participated in writing the legislation, (b) Texas Education Agency personnel who translated legislation intent into the requests for application, (c) principal investigators or contact persons listed on the proposals, (d) directors of Center projects, (e) key university faculty involved, (f) key school personnel involved, and (g) persons nominated by other key informants who have knowledge of staff development processes and effects in the areas of collaboration, technology, and effective teaching practices under auspices of the CPDTs.

Samples in qualitative studies are not wholly prespecified, they evolve once the fieldwork begins (Miles & Huberman, 1994). One Texas policy-maker and eight CPDT Directors were the only prespecified key informants at the onset of this study. My major professor contacted and set up an interview with the legislative aid of the Senator responsible for initiating the Texas CPDT legislation. From that interview, we were given additional names of Texas CPDT policymakers, one representing the Texas Education Agency and another representing the Texas Higher Education Coordinating Board. I
contacted both of these individuals and set up interviews. I then contacted the eight CPDT directors by telephone to set up interviews and obtain a list of other potential key informants. Four of the current directors were not original directors and they recommended adding the original director to my list of key informants. Other recommendations from CPDT directors led to a list of potential key informants involving public school participants, education service centers participants, and university participants.

My original design (see chapter one) specified a differentiation between implementors and recipients of professional development opportunities. Many of the key informants recommended by the CPDT directors were perceived as both implementors and recipients. Therefore, I initially decided to change my scheme for categorizing to include: public school participants, regional education service center (ESC) participants, university participants, CPDT directors, and additional CPDT administrators. When I began to operationalize my data sources, a confidentiality conflict became evident. Some of the categories, such as the CPDT directors and other CPDT administrators, were so limited in number that I was not able to secure anonymity. Consequently, my final scheme retained three categories: (a) public school representatives, (b) university representatives, and (c) regional educational service center representatives. CPDT directors and other CPDT administrators were included in the category of "university representatives." I applied an exception to the regional ESC category. If a CPDT had only one regional ESC key respondent, I chose to identify that one ESC representative as a "school representative" to secure anonymity.
The recommended names provided by the CPDT directors were added to the prespecified list, resulting in a target sample of 83 informants (n=83). A final list of key informants consisted of those individuals who were available for interviewing during the period of the study and who were willing to participate (Appendix C). I was able to arrange interviews with 3 policymakers, 10 CPDT directors, 3 additional CPDT administrators, 44 public school participants, 5 education service center participants, and 18 university faculty participants.

Data Collection

Data were collected on the selected CPDTs through several means, including key respondent interviews, focus group interviews, field observations, and document analysis. Using a variety of data sources allowed me to extend beyond the limitations of using a single data source.

Prior to initiating any interviews, I gathered the original grant proposals from each selected CPDT. These program documents were made available to me from the state funding agency and allowed me to study in advance the explicitly stated collective values and beliefs of the participants in each setting. The proposals documented the consensus of participants on culminating mission statements, goals, objectives, and actions plans. The proposals also provided detailed demographic descriptions of the various partnerships and complexity of each CPDT. The interviews that followed this process would not have made sense without having studied this documentation. I saved valuable time by not asking questions for which answers were provided in the proposals.
For example, by studying each CPDT's mission statement and accompanying goals, I was able to focus my interview questions more on how these outcomes were a part of the big picture - the ideal - the vision. I was able to avoid questions directed at merely defining what the outcomes of the vision entailed and instead, directed the questions to expressing the new reality, the vision, of the CPDTs and how the vast array of interrelationships are interdependent and interconnected.

I also collected copies of quarterly reports from each CPDT prior to the interviews. These documents provided me detailed information on professional development activities that had occurred in each CPDT over the past three years. Again, by studying these documents in advance, I was able to spend less time on professional development content and more time on professional development processes.

My first set of interviews were designed to pilot my interview questions. Six new CPDTs were funded in 1993-94, the second year of the Texas CPDT initiative, and I selected three CPDT directors from these second year Centers to be a part of my pilot study. My selection was based merely on their willingness to participate. I ceased additional contact after I had gained three acceptances to participate. Due to the professional development focus of my study, one of the directors recommended that I also interview the assistant director who was actively involved in professional development activities. For a list of the four pilot study participants, see Appendix C.

Due to information gained from the pilot study, I made the following shifts of focus in my questioning techniques. First of all, it became clear in the very first interview that I needed to clarify my use of terminology. The constant exchange of the term "staff"
development” and “professional development” proved to be confusing for the interviewee. My decision was to provide definitions at the beginning of the interview for both terms, explaining that staff development was part of professional development, but for purposes of this study, primarily referred to the professional development of experienced classroom teachers. The term professional development was used to encompass the professional development of all levels of participants: preservice teachers, inservice teachers, and university faculty.

A related shift occurred in regard to the probe question that asked about literature-based or research verified staff development models. My original reason for asking this question was an attempt to tie directly to the review of literature on staff development. However, I discovered during the pilot study that requesting particular research on staff development models was too confining. I changed the question to request information on any literature-based or research verified models that were used to drive professional development decisions.

The pilot study also provided insight into how best to sequence the questions. Even though the order of questioning was flexible, dependent on the knowledge and involvement of the participant, it did prove to be helpful to start with vision topics and lead into implementation topics. If an interview started with implementation topics, it became difficult to naturally shift into vision topics. Even when the interview started with a vision focus, the interviewees still tended to naturally shift into implementation topics before vision questions were completed. I decided to implement two strategies to overcome this problem. First, I found it beneficial to take accurate notes so that I
appropriately could shift the interview back to the vision piece to fill in the gaps, and yet not disturb the flow of the interview. Secondly, I made it clear in my introduction what this study meant by “vision”.

A final revision, resulting from my pilot study, involved reducing the original six questions to three questions. The original six questions asked the interviewees to discuss aspects of the CPDT and then a follow-up question asked them what aspects of the CPDT were perceived as being the same or different than before the CPDT emerged. The follow-up question consistently led to answers that were repetitive to what they had already discussed. In an attempt to efficiently use interviewee time, I chose to decrease redundancy by truncating the question guide to three questions (Appendix B). I inserted the word “unique” to address the comparison probe. For example, the question that asked the respondent to describe the “vision” for professional development in the CPDT, was revised to ask the respondent to describe the “unique aspects” of the “vision” for professional development in the CPDT. When appropriate, I would use additional probes to verify if a certain perception or event was unique to the CPDT initiative. For example, if the interviewee responded that a similar event or series of events had previously been attempted, I would probe them to elaborate and compare the previous attempts with current CPDT enactments.

After the pilot study, I contacted by telephone the eight CPDT directors and scheduled telephone interviews with each of them. Telephone interviews were used because I had developed pre-established relationships with each director over the course of the past three years. The CPDT directors provided me with names and contacts for
additional key informants, including potential focus group participants. Prespecified themes for focus groups were originally designed to include professional development implementors and professional development recipients. Due to shared roles and responsibilities, the CPDT directors had difficulty separating implementors and recipients. In many cases, a single informant was identified as both an implementor and a recipient. Instead, the CPDT directors suggested that I design focus groups that center around: (a) technology and (b) other staff development.

Prior to the interview sessions, I requested to tape-record the interview and explained that the data would be used as part of this dissertation and, possibly, in future publications. Participants were assured that any request to keep the source of information confidential would be honored. A written consent form was made available to them. All participants allowed the interviews to be recorded. The process for conducting the audiotaped interviews was: (a) to establish rapport and provide a brief explanation of the study; (b) to seek permission to record the interview; (c) to ask the key informant specific, open-ended questions related to the research questions of this study and use probes as necessary to evoke greater specificity; and (d) to transcribe the interviews verbatim to written format.

I followed this interview process for individual and focus group interviews. Focus group interviews were conducted on-site with small groups, ranging from three to eight participants. I organized the focus groups homogeneously according to their area of expertise, resulting in groups of technology professional development implementors and recipients, and staff development implementors and recipients. As pointed out by the CPDT directors, I found that many participants who were current implementors had also
been previous recipients. Consequently, a distinct separation of the groups was not always possible. My intent on separating these key participants was to avoid the need for building group awareness across expertise, therefore making more efficient use of time. I decided that more detail would be provided if focus groups were able to elaborate within the parameters of their own expertise. Blending of implementors and recipients under the circumstances of the study did not interfere with my intent. The awareness of expertise remained evident. I was able successfully to separate individuals with a technology focus.

Field observations and additional documents for analysis were collected during on-site visits. Observational data involved gathering information that described the setting, the activities, the people, and the mission of the eight selected CPDTs. Observational data included planned program activities and formal interactions, as well as events that occurred informally and unplanned. All observational data were collected and recorded in the form of fieldnotes. These fieldnotes included descriptions of "what was being experienced and observed, quotations from the people observed, and field-generated insights and interpretations" (Patton, 1990, p. 242). Due to my active participation in fieldwork and during interview processes, I was not always able to write detailed fieldnotes as anticipated. Consequently, as time allowed, I tape-recorded my insights and interpretations between individual sessions.

I simultaneously kept a researcher's journal, chronologically recording events along with my own descriptions and interpretations that were separated from the participant's perceptions. I tape-recorded or hand wrote my personal perceptions of events after each day of a site visit. Tesch (1990, p. 87) relates this process to recording "researcher's
memos" in which the researcher constantly searches for connections and patterns in the data, writing down the analytical notions that are conceptual in intent. Due to my familiarity with the setting, I used my journal for later analysis of possible researcher bias. Validity and reliability checks included verifying my perceptions of what was heard and observed with the perceptions of the participants. Kamil (1985) suggests reexamining a researcher's journal for contradictions with other data sources, emotional reactions, formal or informal expectations about occurrences, and judgmental rather than descriptive statements.

In addition to the original grant proposals and quarterly reports previously collected from the funding state agency, on-site document collection included gathering available historical and current artifacts in the form of staff development plans, governing and executive board minutes, campus improvement plans, annual reports, newsletters, and any type of material related to the purpose of this study. All collected documents were used in the data analysis process to help verify findings, fill in gaps, and portray the collective values and beliefs of participants in the setting.

Procedures for Analysis of Data

Data analyzing and collecting processes ran parallel to each other and were informed by each other, with data collection dominating in the earlier phases and data analysis dominating in later phases (Tesch, 1990). I followed Glaser's constant comparative method of developing theory as follows (Bogdan & Biklan, 1992, p74):

1. Begin collecting data.
2. Look for key issues, recurrent events, or activities in the data that become categories of focus.

3. Collect data that provide any incidents of the categories of focus with an eye to seeing the diversity of the dimensions under the categories.

4. Write about the categories you are exploring, attempting to describe and account for all the incidents you have in your data while continually searching for new incidents.

5. Work with the data and emerging model to discover basic social processes and relationships.

6. Engage in sampling, coding, and writing as the analysis focuses on the core categories.

My first goal was to organize my raw data sources into narrative descriptions with major themes and illustrative examples of each CPDT site, extracted through a content analysis process. Patton (1990) recommends doing case studies of each site before doing any type of cross-setting pattern analysis. The process of individual case analysis involved classifying segments of raw data by coding them with letters and abbreviations that symbolized the substance of the categories. These categories were generated from a combination of my research questions that I considered to be relevant at the onset of the study and the raw data collected, allowing codes to emerge progressively and inductively. To accomplish this task, all tape-recorded interviews, fieldnotes, and journal entries were transcribed into hard copy versions. I then reviewed each transcript while simultaneously listening to the tape-recorded version, marking handwritten codes and symbols in the margins of the transcripts. The reason for listening to the tape-recorded version again was
to detect any implications of meaning as only identified through voice inflection. As new data was collected, I repeated this process and compared incoming data with previous data in an iterative manner. This constant comparative method allowed categories to be modified if found to not fit the data (Glaser & Strauss, 1967). If too many segments received the same code, I broke them into subcodes. This process allowed me to select and accumulate exact statements from interview participants that reflected specific responses to key topics.

After I had manually coded a transcript (Appendix D), I entered it into a computer program specifically designed for coding, extracting, and validating research data. I kept the fieldnotes and journal entries separate from the participant interviews to ensure that my own perceptions were not reflected in participant perceptions. Once each transcript was imported into the program, I was readily able to modify previous codes as determined by incoming data and as determined by an inter-rater agreement process. To accomplish inter-rater agreement, I asked a fellow colleague to manually code the first eight interviews from my study. Then I compared her codes with my codes and made modifications that represented agreement. As new codes emerged from incoming data, I continued to verify them with my fellow colleague and my major professor. The computer program's management of the data made this iterative process significantly easier than if I had been cutting and pasting manually. The computer program also provided an efficient way to extract and analyze data. After coding of raw data was complete, I extracted all data related to each code and placed them into a separate document for later analysis.
Simultaneous to coding the raw data, I embarked on another data reduction process that involved writing summary reports for each interview (Appendix E). I developed a contact summary form that asked the following questions:

1. What were the main issues or themes that struck me in this contact?
2. Summarize the information gathered on each target question.
3. Was there anything else that struck me as salient, interesting, illuminating, or important in this contact?
4. What new (or remaining) target questions do I have in considering the next contact at this site?

Answering these questions provided me a means for selecting, focusing, simplifying, abstracting, and transforming the data (Miles & Huberman, 1994). The written summaries also were coded and used for verifying category selections. The contact summaries also provided valuable information for gathering quality data in future interviews and observation processes. Data gaps were identified during the summary analysis, therefore providing me the opportunity to gather the necessary information in subsequent sessions.

After all data were collected and coded, I then clustered the codes into conceptual variables and analyzed them further, exploring for relationships to each other (Tesch, 1990). This process was accomplished through the construction of matrices. My matrices were graphical displays that compared one set of variables as identified in column headings with another set of variables representing the row headings. This process of iterative data aggregation, reduction, and analysis resulted in the development of two matrices. The first set of matrices graphically represented the themes and categories that emerged at
each site from the data collection procedures (Appendix F). Individual interviews, focus group interviews, field notes, and documentation for each site under study were analyzed according to the three research questions addressing vision, enactment, and effects. The second set of matrices displayed cross-site categories and themes that emerged (Appendix G). This cross-site analysis illuminated patterns of vision, enactment, and effects across all eight sites under study. I also used the previously designed conceptual framework to conceptualize the data graphically. This conceptual framework was a flowchart that connected geometrical shapes with one-way and two-way arrows to show associative, temporal, or interactive relationships among codes (Tesch, 1990). Using these techniques, as well as narrative presentations of the sites on a case-by-case basis, data were aggregated and presented by site, then collectively analyzed in pursuit of patterns and trends. This process of data analysis continued until repeated iteration identified defensible relationships. As the “chain of evidence” grew, conclusions were confirmed and conceptual statements were formed that represented the results of the study (Tesch, 1990, pg. 88).
CHAPTER IV

ANALYSIS OF DATA AND FINDINGS

The problem for this study was to describe and analyze three major components of professional development as experienced within the Texas Centers for Professional Development and Technology (CPDTs). The three components were: a) visions of professional development reform, b) the patterns of enacted professional development models, and c) the effects of these models as understood by policymakers, implementors, and practitioners. A second objective of this study was to extend the data to inferred implications for current professional development efforts.

I posed three questions to address various facets of professional development as perceived by the respondents. The research questions addressed: (a) unique patterns of vision of professional development reform in the Texas CPDTs, (b) unique patterns of professional development as enacted in Texas CPDTs, and (c) unique patterns of effects of professional development programs on target groups in Texas CPDTs.

This study used qualitative data collection and analysis procedures. Raw data were collected in the form of individual interviews, focus group interviews, documentation, and fieldnotes. A total of 46 interviews were completed with 83 CPDT informants representing policymakers, university participants, and public school participants. All interviews were transcribed for analysis. Document collection included artifacts collected during site visits (brochures, articles, course syllabi, newsletters, etc.) and statewide
reports including grant applications and re-applications, program approval applications, quarterly reports, and annual reports.

Data collection and analysis processes ran parallel to each other and were informed by each other, with data collection dominating in the earlier phases and data analysis dominating in later phases (Tesch, 1990). Data analysis followed a constant comparative method of developing grounded theory (Bogdan & Biklan, 1992; Patton, 1990; Straus & Corbin, 1990; Glaser & Strauss, 1967). This process of iterative data aggregation, reduction, and analysis resulted in the development of two matrices. The first set of matrices represented the themes and categories that emerged at each CPDT from the data collection procedures (Appendix F). Individual interviews, focus group interviews, field notes, and documentation for each CPDT under study were analyzed according to the three research questions addressing vision, enactment, and effects. This set of matrices also displayed the data according to the functional role of the respondent. Functional roles were broken into three categories: (a) university representatives, (b) school representatives, and (c) regional education service center representatives. The second set of matrices displayed cross-site categories and themes that emerged (Appendix G). This cross-site analysis illuminated patterns of vision, enactment, and effects across all eight CPDTs under study.

This chapter consists of three primary sections. The first section focuses on the results of eight individual CPDT case reports, the second section focuses on the results of case-by-case data analysis and illuminates patterns identified with each of the eight CPDTs, and the third section focuses on the results of cross-site data analysis.
Results of Case Reports

The following case reports are brief summaries of the chronological history of professional development activity as reported by participants in each of the original eight CPDT projects. Each case report begins with a description of the collaborative taken from representative formal policy documents, continues with the history of the beginning of the initiative as reported by respondents and as contained in operating documents, and then elaborates professional development issues that unfolded over a three year period of planning and implementation as reported by respondents and confirmed in documents.

Southwest Texas Center for Professional Development and Technology

I collected Southwest Texas Center for Professional Development and Technology (SWT-CPDT) artifacts that provided me with a formal description of the project. The first document quoted below is the SWT-CPDT Program Approval Document (Southwest Texas Center for Professional Development and Technology [SWT-CPDT], 1995) which was submitted to the Commission on Standards in May, 1995. The remaining information is taken from brochures (SWT-CPDT, 1995b), final reports (SWT-CPDT, 1992-93; SWT-CPDT, 1993-94), and the 1993-1994 re-application document (SWT-CPDT, 1994) submitted to the state agency for continued funding. The collected documents describe the SWT-CPDT as follows:

The SWT-CPDT is currently a collaborative community involving 11 public schools from 7 independent school districts, a university, an education service center, and a local telephone company. The 11 professional development schools have been purposely selected to parallel the ethnic diversity of the region. The demographics of the 11 public schools is representative of a school population consisting of 55.11% Anglo students, 40.17% Hispanic students, 4.27% African-American students, and the remaining .49% of the students are categorized as "other."
The SWT-CPDT supports professional development through three major features: (a) professional development opportunities for preservice teacher candidates through a restructured field-based teacher education program, (b) professional development opportunities for inservice teachers and university faculty, and (c) technology opportunities. The field-based teacher education program is operating at PDSs located at all levels, elementary, middle, and high school. The program involves three semesters of field experiences beginning in a preservice student’s junior year. Faculty members team teach in nine or twelve hour blocked courses in order to integrate content through thematic teaching and field experiences. Implementation is planned by site teams of classroom teachers and block professors. These site teams and block professors also collaboratively plan the campus professional development activities and technology acquisition and integration.

Instruction in technology occurs in the field and is delivered by campus technology teachers, university faculty, and the SWT-CPDT technology coordinator. Participants in technology training opportunities include preservice teacher candidates, inservice teachers, campus administrators, university faculty, parents, and public school children. Some of the PDSs have networked classrooms and direct connect to the Internet. Some PDSs have computers and multimedia stations in their classrooms. The SWT-CPDT has digital fiber optic, full-motion, interactive classrooms located at the university and one of the elementary PDS sites.

Respondents recreated the collaborative processes that were initiated in 1992-1993 when the Texas legislature awarded SWT state funds to form a school, university, and community partnership charged with the responsibility of restructuring teacher preparation through the creation of Professional Development Schools (PDSs). The participating university people started the process of vision building by “admitting that they really didn’t know much about public school people” (Jan, university representative). Consequently, they invited public school teachers to begin dialogue with them and formed an initial collaborative planning team that included teachers and administrators from San Marcos ISD, SWT university professors, parents and community members from San Marcos.

They (university participants) started with many brainstorming sessions with public school people, asking open ended questions about them and just making charts and charts and charts of their responses. That’s how they actually began that whole
During one of those brainstorming sessions, we had an external facilitator come in and work with us on team building and that sort of thing. We came together and spent a whole day just talking about - What is the mission of our collaborative? What do we really want to be and what do we want to do? So, that's how we actually came about our vision and our mission (Jan, university representative).

During this entire vision building process, the glue that held the team members together was the following question (Jan, university representative):

If the public school teachers - if their classrooms are going to be the classrooms of the future; if their classrooms are going to be the teaching rooms - the teaching hospitals, so to speak, for our interns, then what do they need to look like?

The collaborative planning team was reconfigured as the Policy Council which included parents, community members, teachers and administrators from SWT, San Marcos ISD, Highland Park Elementary in Austin ISD, Elgin Middle School, and representatives from Region XIII Service Center and San Marcos Telephone Company (SWT-CPDT, 1994). The SWT-CPDT Policy Council became the advisory group who acted as a quality control board, monitoring and providing feedback relating to program planning and implementation.

During the initial 1992-93 school year, the SWT-CPDT established a school partnership with two elementary schools, Bowie Elementary in San Marcos ISD and Highland Park Elementary in Austin ISD. One basic criteria for being selected as a PDS was the desire by both administrators and teachers to influence the preparation of future teachers. Other factors for consideration included: (a) evidence of responsiveness to student needs with an emphasis on success experiences, (b) diversity of school population, (c) grade levels appropriate to university courses being taught, (d) space to accommodate university block courses, (e) approval and support of the school district, (f) a positive
environment with leadership which supports risk taking, and (g) willingness of the
majority of school faculty to participate as partners and change agents with a shared
responsibility for intern training (SWT-CPDT, 1994). Bowie Elementary was selected as
an elementary professional development school in October if 1992. Highland Park
Elementary was selected as a partnership site to mentor Bowie Elementary regarding
child-centered classrooms and technology innovations.

Participants representing the Bowie Elementary PDS provided me with a zoom lens
view of a PDS created by initial influences of the SWT-CPDT initiative. The ethnic
diversity of the school and campus support of the initiative were principle decision-making
factors leading to the selection of Bowie Elementary as an initial PDS site. The school
and university partners decided initially to house the SWT-CPDT administrative office at
Bowie Elementary, instead of at SWT. At the time of my field visit to Bowie Elementary,
the SWT-CPDT director and technology coordinator were sharing a small office space
adjacent to the university classroom. The university classroom, set up with a digital fiber
optic, full-motion, interactive video system made available through SWT-CPDT funding,
was used for field-basing SWT teacher education courses. The interviewees did not
provide a detailed account of how the technologies in the room were being used. Little
planning for the actual "use" of the interactive video system appears to have occurred in
the initial planning phases. According to the re-application documentation (1993-94),
installation of equipment at SWT and Bowie Elementary was the major focus during the
entire first year of the initiative.
A core planning team of 12 classroom teachers, teaching third, fourth and fifth grades, was identified at Bowie Elementary and was charged with the responsibilities of working with university people and each other to restructure teacher education coursework and to develop an inclusionary model for professional development opportunities involving preservice teacher education students, teachers, administrators, university teacher educators, parents, and other community representatives. To represent the university, a team of two university teacher educators volunteered to become a part of the Bowie Elementary PDS.

One of the initial tasks that the core team and block professors embarked on was to design and deliver 6 hours of integrated university coursework at Bowie Elementary. The 6 hour block of courses, later replaced with a more extensive 12 hour block of courses, was restructured and collapsed into a single syllabus that reflected priorities of both the school and university, including feedback from the SWT-CPDT technology coordinator for integrating technology. Collaborative efforts between the core team and the block professors that evolved during this process were highlighted as paramount in the changing paradigm unfolding in the SWT-CPDT teacher education program:

The collaboration between university and school faculty has been a major switch in that the university people are not bringing their programs and their syllabus onto the campus and directly implementing it. Instead, they are coming to groups of teachers and administrators on campus and saying, “How should we implement this twelve hour block?” The teachers come away feeling empowered and so professional. It is so wonderful to watch public school teachers change when university people say, “You’re the important ones. You’re in the field. You tell us how it should look when it’s done” (Jan, university representative).
The Bowie team of core teachers that were interviewed further elaborated on barriers that were broken down during collaborative efforts:

At the beginning we were really kind of scared to get into it (the initiative) because we didn’t know how rigid the professors were going to be or how flexible they were going to be. We were a little bit hesitant to voice our opinions. But right after the first couple months, or so, we just all kind of clicked. The university professors were real interested in what we were doing and in what really happens in the classroom, and expressed that and made sure that we knew that our opinion counted and what we, that we were the ones that were going to pretty much set the pace for the interns and pretty much tell them what we wanted them to do, not what they wanted them to do (Jeanna, school representative).

I couldn’t believe these professors were actually valuing what I had to say. Because I always thought they never knew really what was in the real world, you know? And there they were - in our world - and they wanted to listen to my idea and value my planning (Sara, school representative).

I was on the original evaluation committee. And I was there with a bunch of mega people, you know, with degrees as long as your arm. And I was really impressed - the moment I went in there they were very in tune to what I had to say. You know, they wanted to know what the classroom teacher did and they were building from there on out. So, I was just totally in awe of how much collaboration there really was in the whole process (Daren, school representative).

Collaborative efforts of restructuring university coursework increased communication efforts between all participants. Increased dialogue emerged between university faculty:

Changes that have come about with university faculty that’s so interesting is that they are actually planning together and they’re looking a their content and prioritizing. I’ll give you an example: (Paula) and (Nicki) sit down together - (Paula) is responsible for 6 hours and (Nicki) is responsible for 6 hours - and plan their content, prioritize their content, and then talk about how they are going to integrate these (12 hours of coursework). For example, if (Nicki) is teaching planning and developing lesson plans, how does that fit in with the reading that (Paula) is teaching? They put together one syllabus with one schedule and they give one grade. Now, each course, because it is still on the transcript separately, has a grade on it, but it is one grade. And that’s been a real effort - getting together and deciding that maybe this content doesn’t need to be covered or maybe it can be done in another way (Jan, university representative).
All of these collaborative efforts did not occur without sacrifice. As the university professors experience a new level of involvement with the public schools, they also share frustration with overloaded agendas:

They (university professors) like it a lot. They like the team teaching. They like the planning together. But, they are frustrated because this really takes a lot of work, a lot of time and a lot of work. They are out on the campuses from eight in the morning to four in the afternoon, two whole days a week. If you can imagine. And then, most all of them teach another course on campus, maybe a graduate course or something. The time to do their research and writing is so difficult for them and they are tired (Jan, university representative).

Decisions for providing professional development opportunities for participants were also a responsibility of the core team and block professors. For example, in order to support a preservice program rich in technology integration, appropriate training was planned and implemented for classroom teachers and university professors. The university and school participants made such decisions together, based on needs assessments. The process of implementing professional development opportunities at Bowie Elementary was initiated when the core team of teachers and the team of university block professors revisited the SWT-CPDT vision and participated in a series of retreat days to create their own vision:

I began to meet with the team of university block professors and the advisory group at Bowie, which we call a core group of teachers. We actually had retreat days that we worked together on their goals - their focus. ...They wanted to go with the integration of technology. They wanted it to be another tool and they didn’t want it to be something that stood alone in the classroom. So, the first major focus was with writing across the curriculum using technology (Jan, university representative).

The Bowie collaborative decided to focus on building student-centered classrooms by integrating technology into an integrated curriculum. Even though this focus was
described as the encompassing vision for the Bowie PDS, Daren (school representative) perceived the vision as not being completely understood in the beginning:

> Basically the vision was that we had no vision at the beginning. At least where I was concerned. I didn’t know what to expect - where we were going, or anything. We knew generally what we wanted - technology in the classroom - make it student-centered. But, I didn’t know what that meant at all (Daren, school representative).

For example, the first major action plan created during the vision building process, was to emphasize writing across the curriculum areas using technology software such as ClarisWorks, Kid Pix, Bank Street Writer, and Hyperstudio. Understanding and implementing this plan was identified as an evolutionary process because “they (the teachers) wanted it all to be integrated and they talked that talk, but they didn’t quite know how it would look” (Jan, university representative). So, insights from the vision building processes led to implementation needs, but the participants were not able to understand their vision or aim their focus until actual implementation occurred.

One of the first professional development opportunities enacted for the Bowie team was participation in site visits of schools already implementing student-centered strategies through curriculum and technology integration. Highland Park Elementary in Austin ISD, which was selected as a mentor site for Bowie, was the first site visit. Due to their mentoring relationship, five Highland Park teachers teamed with the 12 core teachers from Bowie and shared things such as Hypercard stacks, telecommunications training, information on thematic planning, and writing across the curriculum using technology. To further support the mentorship, Bowie and Highland Park partner teachers were technologically linked through TENET (Texas Educational Network). However, there
was only access to one modem at Highland Park, which greatly decreased the frequency of use.

Bowie’s core team made additional site visits to other schools that innovatively used technology. The site visits were described as “incredible experiences, not only for seeing what was happening, but also for the synergy that was created among the persons that traveled together” (Linda, university representative). It was these initial team building opportunities that were reflected in the emotional tones of the interviewees. A group of core team members expressed that they developed close relationships with each other and the university people, so close that as the SWT-CPDT began expanding and “spreading its wings,” they began feeling a sense of loss because they no longer felt like they alone were the center of attention:

...The CPDT is spread out where it includes more people now. So, I miss the little group. I know that it had to end sometime, but I still miss that. I mean, I liked all that close knit family orientation (Jeanna, school representative).

I think it has been hard for the people running the CPDT, too, because they’re having to spread out so much now and go to so many different schools. And that’s just got to be. But at first, well, they were just always there for us. ...And now it’s like, “Gosh, now they’re not here.” But, then I just got over that and realized that they didn’t have to be here every minute. They have still been very supportive whenever I’ve needed something (Julie, school representative).

The core team members from Bowie that were interviewed also described an “alienation effect” that they felt other teachers on their campus experienced as a result of not being a part of the original core team and the “close knit family orientation” just described.

If you were to pull in some non-original core team teachers, I think you would find that some of them felt alienated and that they didn’t feel a part (of the CPDT). They’d probably say, “Oh, this year we’re a whole CPDT school. Okay. That’s a name, but what does it really mean to me” (Sara, school representative).
We were worried about what the other teachers thought who were not on the core team. You didn't want to alienate anybody ... and yet we felt like we were entitled to some of the privileges because we were working real hard at real long meetings. We went through a lot of ups and downs. It was a fun year. We got to be real close, because anytime you go through something like this, you get to know each other real well. And we were like a family (Jeanna, school representative).

Following the site visits and planning phases of the Bowie Elementary PDS, professional development opportunities entered into implementation phases. The initial focus of professional development activity was on technology. A major portion of SWT-CPDT funds was used to build technological capacity at Bowie, offering an incentive for teacher participation.

Yeah! Yeah! I would have never done it (participate in the CPDT) without the technology. I mean, I probably would have been the same old person. I didn't realize that, you know, my attitude was, "Oh, it goes around in circles. It's just going to come back. It's just a new fangled thing." But this was like all of a sudden we had money to do things - we had - I had technology. ...I didn't know what a computer was. I just thought techy people ran those things. Nerds, you know. And then all of sudden, I'm doing it. And plus, I had kids that were showing me stuff that I didn't know, and it was okay. It was all right for me to fail and was okay for me to succeed. And you know, it was fun (Julie, school representative).

A sampling of professional development activity implemented at the Bowie PDS includes a variety of technology opportunities. One entire week was devoted to technology training and follow-up with weekly support from the SWT-CPDT technology coordinator. The technology facilitators from the Bowie campus held Saturday workshops, inviting parents and children to work together learning about computers. They also organized a summer computer camp for their children.

As the Bowie PDS became more and more involved with integrating technology into their site, participants began to perceive student-centered classrooms as being critical to the success of the level of technology integration they were seeking:
Those (teachers) that were very traditional and very structured could not integrate the technology. They were still saying, "Well, when you finish this, you can go to the computer and do this." But when they began to change the focus of the classroom, and the fact that they let their children be more the center and not the teacher, the whole issue changed. ...What they learned was that their classroom structure had to change in order for the integration of technology to be successful (Jan, university representative).

When I asked Daren to give me an example of a student-centered classroom, his response was directly connected to technology:

The student-centered classroom has had a big impact on me. It's changed my own teaching from three years ago to today where the kids are a lot more involved in technology as a part of the classroom instead of a place to go. The content of a lesson is dependent on the teacher, but how the student gets to the content is really wide open. And that's where the technology comes in, whether it's calling a SWT professor - because we have phones in the classroom - to ask how much a gallon of water weighs, or whether it's getting onto the telecommunications and dialing up a weather service or a school library network (Daren, school representative).

All of these professional development opportunities, the integration of technology into the curriculum as well as participant involvement in restructuring teacher education coursework, led to new roles and leadership opportunities for Bowie teachers:

The work that we did with Bowie actually empowered those teachers so much and it was one of the most exciting things - because they had not had that opportunity before. We had teachers that had never been to a national conference and we sent them to ASCD last year. I can't describe what it did to them. It was like something opened up in them to see things differently - expanded their horizons (Jan, university representative).

The CPDT allowed us to go to one national conference. And when we went, you know, we were expecting to hear these fantastic things. And what we discovered was we were the leaders and we were the ones that were pretty much setting the trend as far as technology and things we were doing in our classroom. That was a real eye opener for me to realize that a lot of what we did was the right thing to do (Jeanna, school representative).
Bowie teachers collaborated with university block professors to attend national conferences, prepare presentations for staff development, and publish journal articles:

I kind of feel like what has changed the most in my life is being, feeling much more like a professional than I ever did before. I felt like I have grown in my own teaching and what I do in my classroom so much from all the staff development. Not so much just receiving it, but also delivering it. You feel like you’re treated like a professional and you are an expert at what you do. And when you share with other teachers and with the students, it really lends credibility to what your job is (Jeanna, school representative).

Jeanna further elaborated on how she feels that participation in the CPDT has helped her feel less isolated:

I don’t feel isolated anymore, you know? I don’t feel like I’m in my classroom all day long, and no one else knows what I do, except me. I really like being able to share what’s happening in the classroom. I also feel like it’s given us a lot of pride in what we do because we are so much in the focal point. You know, we have visitors all the time that want to walk through our classrooms and want to see what we’re doing. And, I think it gives the kids that feeling, too, knowing that anything they do, any project they do, someone’s going to look at it and comment on it (Jeanna, school representative).

Professional development opportunities were made available to all PDSs as they began emerging within the SWT-CPDT. Each site followed in the footsteps of the Bowie partnership and organized a core team of teachers and a team of block professors to engage in making site-specific decisions. The SWT-CPDT expanded its partnerships in 1993-94 to include two middle schools. An additional seven PDS sites were established during 1994-95.

Professional development highlights from these PDSs illuminate the site-specific nature of PDSs. For example, in a PDS located in New Braunfels, two SWT block professors planned professional development events with the curriculum director, two
principals, and the advisory core team of teachers. They decided to concentrate on math and technology. They organized a train-the-trainer's model for professional development delivery which involved the development of teacher cadres. Each cadre received specialized training and were held responsible for spreading their new knowledge to their peers.

Kyle Intermediate is another site specific example where two SWT teacher educators, the building principal, and the Kyle curriculum staff development cadre planned collaboratively for an all inclusive field-based, professional development agenda. Kyle Intermediate is a school identified as being "fertile ground for a PDS" (Jan, university representative). Due to visionary leadership, Kyle Intermediate had their own mission intact prior to becoming a partner in the SWT-CPDT. Such vision gave the PDS a "jump-start," a built-in focus based on site-based decision making and total quality education. The SWT-CPDT provided professional development resources to support curriculum decisions involving integrated thematic instruction, inclusion practices, and technology integration. For example, Kyle Intermediate was already very involved with technological applications that had been made available through the school district. The SWT-CPDT initiative was able to enhance the school's technology further by extending technology training to preservice students who were field-based on their campus. Not only did this provide professional development opportunities for the preservice students, but classroom teachers were exposed to the many ideas generated by the university students:

...With professional development, the teachers not only were having (university) students coming and working with individual students and in groups and getting benefit from that, but also they were seeing the innovative strategies that they
(university students) had been taught in the block program. So, our teachers were learning from the (university) students and vice versa (Cynthia, school representative).

I think it (SWT CPDT teacher education program) has had a big impact on teachers, because they are getting more hands in there (the classroom). We have (university) students experimenting with technology and they (the teachers) see that...good ideas and good lessons. And then the teachers say, “Well, wait a minute, you know, I could probably do that when I do mammals.” This is kind of a progressive thing, and so I think the impact is that it opens teachers’ eyes (Barbara, school representative).

The emergence of technology skills with classroom teachers and preservice students participating at Kyle Intermediate PDS, as well as those participants in other PDSs, had an extended impact on university teacher educators. Linda (university representative) defined this process as the “back door” method of training. She explained it like this:

The professors get out into the schools. They see what the teachers are doing. They see what the university students are doing. This is what opens their eyes much more than any training sessions. It’s their presence in the schools that has initiated growth in using technology.

The “back door” method provided an avenue for training university faculty who were identified as “the most challenging group” (Linda, university representative). The majority of university faculty tended to have difficulty getting over the wall of “I’ll do it all myself” (Linda, university representative):

This year we added a bunch more teams (blocks of university professors). At the beginning of the year, in August, we had a meeting and we stated that each block would get a budget and each block was to work with me (the technology coordinator) to decide what technology they wanted to purchase and how they wanted to use it. I think it was an excellent plan, but it did not get carried through. ...I think professors just in nature have a tendency to just do everything themselves, and so they had a tendency to feel like they just needed to go ahead and decide for themselves. And the majority of them just purchased laptops for themselves. All the training (for them) has been on an individual basis. By individual basis, I mean that when they have a problem, they call me. As far as experiencing what all they can do with the potential of the technology, they never get over that wall of “I’ll do it all myself” (Linda, university representative).
The “back door” method indirectly encouraged select university faculty to get involved with the kinds of technology being used by their students and the mentor teachers at the PDS sites.

Linda (university representative) expressed insights regarding effective professional development models for inservice teachers:

Instead of teaching a technology, like multimedia or Internet, at the onset, I give them sort of a sampling of several different types of technology skills. I introduce an entire menu of topics. After the introduction, I find the ones (participants) that are interested in taking off in a particular direction. They become the experts and the trainers. There are usually only a few that become experts and we send them to conferences and training. I’ve seen too many teachers appointed to learn some technology technique that they really aren’t that excited about. It doesn’t go anywhere if they aren’t excited about it. We had somebody that took off on telecommunications, another that took off in hypermedia. We sent them to training sessions and now they are training others.

Linda (university representative) also shared that she personally has made significant changes in how she delivers technology training sessions. She has learned that “less is more.” Due to rapidly advancing technologies, Linda felt a need to keep up. Consequently her training needs accumulated at a pace difficult to follow. So, instead of trying to incorporate every possible technology skill into a training session, she focused on doing just a few technology skills with a lot of curriculum ideas. The primary focus on curriculum connected the teacher to the familiar, resulting in more implementation of the secondary focus, technology. “Less is more” also proved beneficial for preservice students. Initial feedback from the students indicated that they were feeling overwhelmed with technology and were not successfully integrating technology tools into the curriculum. By reducing the number of technology skills being taught, and increasing the
focus on curriculum ideas, the students became self motivated to learn whatever
technologies were necessary to teach the lesson they wanted to implement.

Delivery and implementation of professional development opportunities within the
SWT-CPDT, has occurred in many different flavors. External facilitators have been used
to train cadres of teachers and university faculty. For example, Susan Kovalik from Susan
Kovalik Associates trained a cadre of teachers on her Integrated Thematic Instruction
(ITI) model. Leslie Huling-Austin, a teacher educator with expertise in mentor teacher
training, trained cadres of university teacher educators and classroom teachers. External
facilitators were emphasized as being critical to the success of implementing select
modules:

We have decided that with this particular training (ITI), we need outside people to
come and talk to our entire faculty. The cadre got the book and read the entire ITI
materials, but we didn’t feel that we could give it justice within to share with all the
other teachers. So, we brought in a consultant (Cynthia, school representative).

A shift to internal facilitation increased as more and more cadres of trainers
developed. Both internal and external facilitators were responsible for the “rave” reviews
that resulted from the SWT-CPDT summer institute. During the first year of the initiative,
the SWT-CPDT collaborative planned and implemented a summer institute addressing
PDS site-based needs and invited university faculty and teachers from the entire region.
Due to popularity, the summer institute has become an annual event for the collaborative.

According to Jan (university representative), professional development opportunities
provided by the SWT-CPDT initiative “catapulted” the participants forward in their
professional growth. The accumulation of ideas generated and implemented from the site
specific needs of the various PDSs has contributed to broadening the depth and expansion of professional development opportunities for teachers, administrators, professors, and parents to focus on enhancing personal and professional capacity to create inclusive learning communities. University interns and K-12 students benefited from this expansion of professional growth through changes in instructional content and classroom environments. Comments such as, “The (university) students are more prepared for student teaching and first year teaching” (Jan, university representative) reflect these benefits. Daren (school representative) further elaborates:

So, they get hit with student-centered classrooms and technology and all that - you know - practical settings. So, that’s really where we viewed the teacher ed program changes. Before they’re even into the student teaching mode, when they’re first forming their ideas about education, they’re in the classroom with all this technology being used and where the focus is on kids. You know, it dramatically changed their focus - may have even run some of them away from education because of the involvement.

Jan (university representative) also described benefits for K-12 students:

And I tell you, some of our kids- and also because of training we have done with our teachers - we have kids that are so proficient in telecommunication. We took a group - we were invited to bring a group to show case in the capital ...and those kids demonstrated all the things that they had done with technology. One child - he could teach anybody anything on telecommunication. We took kids who had done HyperCard stacks and took their products. We actually did things there so that they were demonstrating how to put together graphics and how to do databases. Some of our kids - it was just mind boggling.

We’ve also done - we did a major piece last Spring where we put together a big problem and we brought students from CPDTS’s teacher’s classrooms and student from non-participating classrooms. We found some interesting things in that the students that were from the CPDTs teacher’s classroom use computers different in that those that were not CPDT students - they used the computers to get the answer; whereas the CPDT students used the computers to get information.

Mari (school representative) further elaborated:
...what the non-CPDT kids did was go all over the computer. I mean they were looking in all these different places and really not accomplishing anything. They were more or less playing, you know, trying to find things. And the CPDT kids went straight into the word processing and started compiling a list of things they could do. And so what that showed was that there was a lot of collaboration in those kids. And that comes from being student-centered, I think. They've been taught to work collaboratively. They've been taught to make decisions. Unfortunately, TAAS won't reflect any of this...

**Texas A&M Center for Professional Development and Technology**

The following formal description of the Texas A&M Center for Professional Development and Technology (A&M-CPDT), also identified as the Texas Education Collaborative (TEC), is taken primarily from two documents, the 1992-93 final report (Texas A&M Center for Professional Development and Technology [A&M-CPDT], 1992-93) and the 1993-94 final report (A&M-CPDT, 1993-94). Recent updates are provided from documents collected in 1995 from the Texas Education Agency, such as quarterly reports and evaluation summaries.

Texas A&M University, Prairie View A&M University, five school districts, two Regional Education Service Centers, and community representatives have established a Center for Professional Development and Technology known as the Texas Education Collaborative (TEC). The objectives of the TEC are to: (a) obtain, implement, and investigate evolving technology systems at the school sites and the participating Colleges of Education; (b) provide staff development experiences regarding immediate instructional applications for these systems for school and university faculty, and (c) develop teacher education programs that accommodate the characteristics of learners and incorporate technology into instruction. During the first year of funding from the Texas Education Agency (TEA), the TEC focused on establishing an infrastructure of both technological and social networks to enable restructured teacher education programs to be developed in a collaborative manner. Emphases were placed on the acquisition of technology equipment at school and university sites training on the use of that technology, and collaboration among school and university faculty. Activities included technology staff development, conference participation, meetings, team building sessions, and a retreat for school and university faculty to build a shared vision for restructured teacher preparation.
In the second year, 1993-94, the focus of the TEC has been directed toward restructuring preparation programs for educators. Collaborative program development activities include: (a) shared planning of restructured university teacher preparation programs which emphasize field experiences for preservice teachers; (b) collaborative grant proposal development for technology enhanced practices; (c) exploration of distance learning technologies to enhance collaboration and instruction; and (d) providing platforms for teacher/principal research through shared conference presentations on collaboration and emerging educational technologies at state, regional and national conferences.

Collaborative efforts at Texas A&M University and Prairie View A&M University are examples of simultaneous initiatives folding into each other and bringing forth changes in both schools and universities. As the Secondary Education Collaborative (SEC) and the A&M-CPDT were described in detail, I discovered the difficulty of separating and assigning specific effects to one particular effort. Gary (university representative) describes the process of how various initiatives at A&M feed into a “broader notion of restructuring” and he specifically highlights the A&M-CPDT initiative as being a part of this process:

In one characterization, the CPDTs, as with any externally funded temporary initiative, is a virtual reality, not a natural reality. The CPDTs in this initiative are the seeds, the virtual, that are being planted. But, because we are looking at constructs like institutionalization and because we’re looking at constructs like demographics, that’s what we’re really dealing with. So, for example, can you separate establishing an Office of Minority Affairs or Student Affairs and the virtual notion of the CPDT? No. They both feed into the broader notion of restructuring (Gary, university representative).

The A&M-CPDT became better known as the Texas Education Collaborative (TEC) and was one of the original eight statewide funded CPDT initiatives. Its original focus was twofold: (a) to carry the “hallmark of an inclusionary model, including students, preservice teachers, inservice teachers, school administrators, and university faculty in all
decision-making processes” (Gary, university representative); and (b) to emphasize the acquisition and set up of technology hardware and software and provide appropriate training.

The evolution of TEC was described as funneled through three implementation phases (Martha, school representative). The first phase, the planning phase, was structured for vision building and team building. A Coordinating Council was formally established as the policy making body and involved representatives from Texas A&M University, Prairie View A&M University, TEC partner school districts, and the region Education Service Center. The TEC Coordinating Council held discussions involving budget, technology purchases, and teacher education restructuring efforts. Each TEC partner school had a site council involving at least one site coordinator, two teachers, a building principal, and business, parent, and ESC representatives. Main topics of discussion by site councils were defining roles, technology, staff development, budget expenditures, and field experiences for teaching candidates. The numerous councils and their discussions led to building relationships that had not been previously established:

I think I come from a unique perspective because I was a teacher at the time the CPDT started. It was a very unusual experience for me because I had been involved with other projects, but I had never been invited by the Dean of the university. They were asking me what I thought about how things should be done and how did I think teachers would accept this and that. And it was at that first retreat that I saw true collaboration and the breaking down of barriers. We all used first names. We didn’t identify each other in any other way and professional status was not an issue. I began hearing about collaboration - and more collaboration. Now I look back and realize that we were doing it right there and then. Friendships were formed and networking began. That, I believe, is the real heart of the TEC. I call it our circle of collaboration (Janet, school representative).
Numerous events fed into the vision building phase. A planning retreat took partners through a consensus building process for creating a mission statement illuminating the ideal in education as well as the barriers in reaching the ideal. All-day workshops were held for university faculty to explore the organizational structure of teacher education programs. A technology integration task force was formed to redesign upper-division teacher education courses for the integration of evolving technologies. Technology visionaries were sent on site visits to schools out of state and in Texas that were high technology schools:

We went to visit a school in Louisiana that's heavy on technology. And we went to conferences and events to learn as much as we could before purchasing any equipment. It's too bad we couldn't have taken even more people with us to get the big picture (Jerry, school representative).

The highlights of the planning phase as TEC began its journey led into the second phase that was described by one interviewee as the “technology carrot” (Martha, school representative). State funding opportunities provided TEC with money to build technological capacity in the schools and at the universities. Compressed video systems for distance education were installed in five PDS sites and both universities. Multimedia equipment was placed in varying degrees at each PDS, depending on specific needs of the sites. For example, one of the PDSs, an intermediate school, chose to have a teacher presentation station installed in each classroom. Another PDS chose to purchase laptop computers for teacher checkout. The site councils were charged with the duty of determining what their campus most needed. After the equipment arrived, phase two
earned its title of “technology carrot.” The school partners jumped head first into  

discovering and exploring with their “new toys” (Martha, school representative):

   It took us an entire year to learn about the technology. We felt it was important to  
   have our own feet on the ground before we could make a dramatic impact on  
   preparing teacher educators. We needed first to understand the hardware and  
   software, and then we needed to discover how to use it in our curriculum. This takes  
   time and lots of training (Martha, school representative).

   The third phase began to focus on teacher education and the concept of professional  
   development schools. The initiative shifted its recognition to being a Center for  
   Professional Development and Technology (CPDT). The TEC acronym faded and was  
   identified primarily as the “technology component” (Martha, school representative).

Restructuring of teacher education programs became the new focus.

   The Secondary Education Collaborative (SEC), an independent initiative emerging at  
   Texas A&M University, played a significant role in the teacher education restructuring  
   efforts of the TEC. Gene (university representative) provided a detailed chronology of  
   SEC events. Since the fall of 1992, Texas A&M’s secondary teacher education faculty  
   had been meeting and discussing the need for redesigning the secondary program. The  
   faculty members started gathering information on William Glasser’s (1992) Quality  
   Schools and Theodore Sizer’s (1992) concept of Essential Schools. To continue and  
   expand upon their dialogue, the secondary faculty held an invitational conference inviting  
   practicing middle school teachers, practicing secondary teachers, public school  
   administrators, university colleagues from various disciplines, and university colleagues  
   from the College of Education. Some of the individuals invited to the invitational
conference were also members of the emerging TEC initiative, resulting in the initial phase of weaving initiatives together:

We had a number of school districts in this vicinity invited to the conference and we were extremely pleased with the initial enthusiasm. Part of the individuals who were invited came from a few schools who were a part of TEC...The TEC, which was looking at redesigning teacher education programs hooked up with our Secondary Education Collaborative and became part of it. They became a major support for the redesign (Gene, university representative).

So, the 45 participants of the invitational conference formed themselves into what became entitled the Secondary Education Collaborative (SEC). Their main task was to put together a redesigned program for secondary education. This was a dual process encompassing the public school arena and Texas A&M University:

It was clear to us in higher education that the public school arena was taking ownership of the redesign as well as the university. This set a precedent at Texas A&M University because it was saying that the public schools were playing a major role, not only in the redesign, but in fact, they were also making a commitment to the program’s implementation (Gene, university representative).

To support their efforts, the SEC submitted a proposal for funding to TEC and received money for staff development activities. Teachers became involved in mentoring university students and also become consultants in field-based methods courses. They served on numerous committees with university faculty. Staff development funds were used to compensate the teachers for their time and efforts. However, Gene (university representative) clearly stated that the SEC was not dependent on state funding:

The uniqueness of our program, we believe, is that it is going to be fully implemented with the support of our colleagues not just on campus, but of our teachers who are going to be willing to take our students in their classrooms, work with them, and come into our methods classes as consultants. The teachers see the preparation of future teachers as part of their professional responsibility, as opposed to expecting the university to pay them for their time. I think the uniqueness of the program is that it is not going to be dependent on state mandates or state funding, but rather on
ownership of the program which will allow us to participate on a professional service basis (Gene, university representative).

As Secondary Professional Development Schools emerged, rumblings of restructuring teacher education also were being heard in elementary education. During the development phases of the TEC and the SEC, an elementary education professor from Texas A&M took a sabbatical to gather information regarding model professional development schools (PDSs) as defined by the Holmes Group (1986). After his return to the university, he designed a special topics graduate course on PDSs. It was this course where the "seeds got planted" to develop elementary professional development schools (Stephen, university representative). Principals and teachers from three elementary schools that took the course began developing a PDS and became partners in the TEC initiative. Jana (school representative) described the process of partnering as follows:

"It's all about perception. The university is not seeing themselves as coming in to fix what's wrong with the public schools. Instead, they are looking for reality. What's working right here? What can we learn from you?"

A similar example occurred when two teachers from a junior high school and Allen (university representative) entered into dialogue during summer school in regard to site specific restructuring efforts occurring in their school. The junior high school was at the point of developing a vision with accompanying mission statements. The professor became interested in the school's focus and started making site visits. When TEC invited the junior high school to become a PDS, the Texas A&M professor had already built a relationship with the school and requested to become the university liaison. Allen (university representative) reflects on his experiences as a liaison as follows:
You know, all of us who do this (PDS liaison work) do it on our own time. We teach our regular load and work with students here on campus, and then instead of working in the library, or writing, or spending time on research, we do this (PDS liaison work). When you look around, most of the people involved in this, almost without exception, are tenured associate and full professors. Our assistant professors cannot take a risk on the PDSs for research because the research is not quick. It's not something that you can grab your data in six weeks and run with. They can't afford to do it because of the time factor. They have to spend their time writing. As for me, it's been great. This here computer on my desk? Frankly, I've learned more about how to use this thing since I've been working in public schools than I ever have at university. You learn by seeing it in action.

The preceding examples provide a snapshot of the various ways that university/school relationships emerged in the TEC initiative. By the 1994-1995 school year, the TEC had partnerships with 18 public schools from 5 different independent school districts. Teacher education programs were redefined and piloted as field-based programs in the 18 PDSs. Compressed video and other telecommunication technologies were installed in two universities and the five school districts to enable state-of-the-art instruction to emerge. Professional development opportunities to address these changes were of many different flavors and each PDS site took on unique characteristics:

As you look at individual school-university partnerships, in fact, they look at different characterizations and they look at different ideological underpinnings. That's the way it ought to be if you've validated the autonomy of each partnership all the way along the line, which we have. So, although part of the mediational aspect of the dialogue is grounded in Goodlad's postulates (Goodlad, 1986), there's been no mandate. ...the over-riding principal is that you learn to ensure the autonomy of the sites and ensure that the voice of the school is paramount. If there was a perception prior to the initiative, it was that the university has for too long told the schools what to do (Gary, university representative).

Most of the PDSs took advantage of opportunities in technology development. Gary (university representative) describes that the "lion's share" of the TEC funding was identified for new technologies and training at all levels of involvement. For school
children, the plan was to “use technology as a tool to intrinsically motivate the learning process” (Elizabeth, school representative). In order for this to happen, classroom teachers needed to learn basic hardware and software implementation and how to integrate technologies into the curriculum. University faculty needed to work with the classroom teachers on similar technologies and redesign their university coursework to integrate appropriate technologies for preservice teacher education courses. However, installing technology equipment took on massive time commitments and implementing critical pedagogies was postponed for nearly a year:

The pragmatics of the situation were that the first year, almost without exception, we tried to work out how we were going to collaborate and how we were going to get technology into the classrooms. Given that, there was very little room for looking at applications and performance indicators. A fairly realistic view emerged immediately that it was going to take a long time to get things in place before we could even start addressing the idea in terms of the vision (Gary, university representative).

Once the technology equipment was in place, additional funding opportunities from the TEC grant provided various professional development activities to address technology needs at the PDSs and the university. One avenue of training focused on the compressed video systems that became operational the second year of the initiative in five PDSs and both universities. The purpose of the two-way video and audio systems was to foster interaction between PDSs and universities and to remove isolation factors. For example, Elizabeth (school representative) represents a rural PDS and addresses isolation as follows:

I have to believe that the biggest effect has been the one guiding thing that got us involved to begin with and that is the fact that we wanted to break out of the isolation that we were experiencing. The isolation is not just distance around here, but the isolation was also attitude. The isolation is very different in a rural environment and it’s easy not only to have your kids become isolated, but also to have your teachers
become isolated. They feel like they can just do their own thing and whatever little difference it would make. So, they lower their expectations. I think that the use of technology has made it all open up like flowers. The telecommunications has broken down old walls of isolation. We’re raising our expectations as professionals and raising our expectations for our students. Even parents are expecting more from us now (Elizabeth, school representative).

University faculty also shared that they experienced the benefits of connectivity between PDSs and universities. Tina (university representative) stated, “This connection is so important. To keep the collaboration going, we need contact with each other.”

Introductory training sessions provided opportunities for the partner schools and universities to explore how to best use the compressed video systems to foster communication. Many challenges were identified. For example, many participants felt very self conscious when displayed on the television monitor. Interactions became more difficult and the need for distance communication etiquette became important. Users discovered that teaching a course to undergraduates that had never had person-to-person contact with the instructor, were not viewed as positive experiences. During the interview that I held over the distance learning system, Martha (school representative) described the need for person-to-person contact as follows:

The first semester we taught our undergraduate class solely over the compressed video system. I don’t think the undergraduates really bought into the idea. They didn’t understand what we wanted to accomplish. We didn’t do a very good job of explaining either. We were so all so new to using the system. We were somewhat disappointed in the progress that first semester. Then the next semester, we not only talked about what were trying to do, but we initially went to the undergraduate class in person and got to know each student in a person-to-person way before we started doing any academics over compressed video. The next group of undergraduates were incredible. The things I did with journal writing on the pioneers of the western movement was absolutely outstanding.
Other challenges with the compressed video system were due to technological difficulties of multi-site connections. Technical interference and audio/video time delays were noted as initial challenges. However, at the time of my interview session (June, 1995), I was able to successfully connect with two PDS sites and one university.

Pilot activities of distance learning over compressed video included connecting groups of preservice teachers at Texas A&M with classroom teachers at PDSs. For example, a group of 15 preservice teachers had six compressed video interaction with a small interdisciplinary team of classroom teachers at one PDS to brainstorm ideas, and to share information and get feedback for developing interdisciplinary thematic units. Another use of the compressed video involved connecting groups of elementary and/or middle school students to the university. For example, one PDS provided opportunities for their junior high school students to learn about careers through compressed video sessions with scientists and other professionals from the university. Compressed video has also been used to connect two or three sites for video-conferences, and connect teachers across sites to engage in reciprocal professional development on implementing joint projects.

Multimedia has been another area of professional development emphasis. Texas A&M student teachers were introduced to multimedia applications and were assigned to implement multimedia as part of their field experiences. Classroom teachers became interested through the help of their student teachers and multimedia exploration pervasively swept from university students to classroom teachers to school children. University faculty became more interested as they experienced first-hand examples of integrated technology as implemented in the PDSs.
Some PDSs formed technology cadres of teachers who received intense training so they could become the experts and train other teachers on their campus. Janet (school representative) discussed how their PDS used benchmarks as a successful model for technology training. For example, the first benchmark was to read e-mail twice a day, the second benchmark was to use the electronic gradebook, and the third benchmark was to use the LCD display in a lesson plan. These benchmarks were spread over a three year period of time and were identified through administering the entire staff an assessment of the levels of use as described in the Concerns-Based Adoption Model (Hord, Rutherford, Huling-Austin, & Hall, 1987).

In addition to professional development opportunities in technology, interviewees expressed their own professional growth had been inspired due to collaborative networking and increased dialogue between partners. For example, Janet (school representative) stated:

We (public school participants) learn from the university and the university learns from us. It’s really a transformational kind of thing. I see it (the collaborative) as having a dual purpose; the creation of professional development schools ultimately changing the course of teacher education, but at the same time, enriching the experiences for students in our schools.

Another interviewee expressed, “It really helps to encourage sharing of information when you’ve developed a personal relationship and interest in the people involved” (Jerry, school representative). Collaboration was viewed as the glue that held the initiative together:

These are real people who I’ve come to know and respect professionally. This is the netting, the foundation that holds us all together. I feel that there are probably a lot of things that will stop when the money stops, but other things will never stop as long
as we have this foundation of collaboration with each other and mutual respect for what the other person does (Tina, university representative).

Another arena of professional development was described through various role changes, especially in regard to classroom teachers. Leaders emerged that were not previously perceived as leaders:

One of the other off-chutes that we never envisioned in this initiative is some of the leadership that we have seen emerge from our own staff and faculty. The collaborative has given people a lot of different ways of evaluating their own strengths and weaknesses. People who were not prominent leaders before have emerged because they have found something of high interest to move forward with (Martha, school representative).

Teachers also experienced enhanced professional activity. Allen (university representative) shared that teachers participating in his PDS were presenting more at professional conferences, consulting for university methods courses and other school districts, and even submitting grant proposals for funding opportunities. Classroom teachers were perceived as becoming much more involved with the teacher preparation program. They were perceived as experiencing empowerment by being requested to provide expertise in designing university methods courses. Jana (school representative) suggested that the extensive modeling required of classroom teachers in service to the preservice teachers was in return enhancing their own professional growth:

I think it's raised the teachers' level of professionalism in that they are on display every single day. They're modeling for these preservice teachers constantly and being challenged to answer questions. How do you teach math with manipulatives? What are your true reading philosophies? Do you use phonics? They're modeling all those things for these students (Jana, school representative).

Jerry (school representative) elaborated that classroom teachers were accepting more responsibilities for technology training. Initially, new technologies and strategies were
introduced by university experts. However, as each PDS grew their own experts,

professional development opportunities were provided in-house on an on-going basis:

A&M was instrumental in sending people out to train small groups of teachers. As
time elapsed, we did more and more of our own in-house staff development. ...We
have people on each campus now that pick up these things more quickly than others
and we use them to share it. So, we do a lot of our own staff development now on an
ongoing basis, but we still depend on A&M to introduce us to new technologies
(Jerry, school representative).

The shift from outside consultants to in-house experts created teacher empowerment.

Leaders emerged that “had never shown any signs of leadership qualities in the past”
(Martha, school representative). Some classroom teachers developed strong expertise and
trained university faculty.

Major tenets of professional development activities centered around technology
integration and collaboration efforts. However, other events were also addressed as
bearing significance toward professional growth opportunities. For example, one PDS
stressed integrated curriculum and inclusion of special populations. Another PDS became
actively involved in university faculty mentoring classroom teachers to help teach methods
courses. The TEC provided numerous opportunities for all participants to learn about
teaching diverse populations. The list of site specific activities is extensive, reaching
beyond the scope of this study.

As a result of professional development and growth opportunities in the CPDT,
university and K-12 students benefited. University interns were perceived as being “non-
traditional” as willing to “take more risks” (Allen, university professor). Gene (university
representative) elaborated that he viewed PDS university students as having “more
learning opportunities” and as being prepared to “make a commitment to teaching.” K-12 students were being given opportunities to break through the isolation of living in rural communities and also experienced increased learning opportunities (Martha, school representative).

The Texas A&M CPDT professional development highlights have been outlined in this section. State-of-the-art technologies and collaborative teacher education restructuring efforts have led to the creation of professional development opportunities that focus on preparing classroom teachers, future teachers, and university faculty for the demands of the twenty-first century.

Stephen F. Austin Center for Professional Development and Technology

Stephen F. Austin State University Center for Professional Development and Technology (SFASU-CPDT) is located in Nacogdoches, Texas. The SFASU-CPDT director and assistant director have offices located on the university campus. They provided me with various documents and artifacts that describe their CPDT in detail. The following formal description was taken primarily from final reports (Stephen F. Austin State University Center for Professional Development and Technology [SFASU-CPDT], 1992-93; SFASU-CPDT, 1993-94) and the document submitted for program approval (SFASU-CPDT, 1995):

The SFASU-CPDT is a collaborative composed of teachers, students, professors, administrators, community members from Stephen F. Austin State University, Angelina College, Region VII Education Service Center, and seven school districts: Nacogdoches ISD, Lufkin ISD, Henderson ISD, Center ISD, Diboll ISD, Woden ISD, and Central Heights ISD. The purpose of the CPDT is to restructure the preparation of teachers in order to improve the quality of teaching in Deep East Texas and thus increase learning among students in the schools of the State. A 39 member board, representative of teachers, professors, administrators, education service center
staff, students, and the community, guides the CPDT and decisions about it's activities are made by Action Teams that concentrate on the various components of the effort. There are Action Teams for staff development, preservice education, recruitment, leadership, technology, and research/evaluation.

Specific objectives of the CPDT are to restructure the teacher/principal preparation programs focusing on field-based instruction; implement appropriate staff development to meet needs of all partners, integrate the use of technology into the delivery of instruction; recruit minority students into the teacher education program, and to increase achievement of all students.

Creating PDSs within the SFASU-CPDT collaborative was described by one participant as a "ready-fire-aim" process (Fullan, 1991). "We had an initial idea, sent teams off to discuss, and immediately started to implement" (Amy, university representative). A 39 member governing board, representative of public schools, universities, education service centers, and the community, grew the initial seed and then branched into action teams for detailed discussions (SFASU-CPDT, 1993-94). These discussions blossomed into implementation rapidly. As the SFASU-CPDT began the process of implementation, one respondent commented that even though the original vision existed, it was "clarified and clarified again" (Amy, university representative). The vision evolved through a cyclic process, as implementation directed and took the lead. This process was perceived as a major strength because it allowed the process of vision building to be on-going, not a one shot event. As new needs evolved, the vision was revisited and program adaptations were made (Amy, university representative). The vision was also described as providing a common thread for all participants:

I saw the vision as really changing the paradigm for all people involved. University people and public school people began to have the same types of staff development and they began developing a common language for dealing with professional and instructional issues. Previously, the university was looking at their vision as pertaining only to university students. We were looking at training only our staff to
improve the achievement of public school students. So, I say that the bottom line of the whole vision was to provide a common language, common objectives, with the end results being that of improving what students learn in public schools. We are all interconnected in that process. We all see that now (Joanne, school representative).

Another interviewee described this process as breaking down barriers and increasing levels of comfort between the public school and university:

To me, when I thought we were becoming a true collaboration or a true team, was at the very beginning when the Dean of the School of Education got rid of all the titles and all the barriers that were between the public schools and university. The Dean insisted that we all be on a first name basis when we came into meetings - we were all just participants. He broke down some of those barriers so there was not "Dr." or "Mrs.", and we seemed to come together as a team at that point (Molly, university representative).

The first major professional development events that fueled vision building processes were site visits to other professional development centers within the state of Texas as well as out of state. Groups of university people, public school teachers and administrators, and central office people explored together, asking questions such as: (a) What are professional development schools? (b) What can we do? (c) What's our vision? (d) What's possible for us? (e) What are our specific needs that we need to address? The site visits allowed the participants to build a reality of what already existed and provided a frame of reference for creating PDSs of their own. The site visits were also perceived as the first real act of collaboration:

It seems to me that the initial thrust of the program design was to get everyone clear on the concept of professional development schools. You know, what is the vision of PDSs? How can we better collaborate with our partners to not only improve teacher education, but how can we improve schools at the same time. ...The first major staff development was site visits to other professional development centers. In fact there were some out of state - San Diego, Utah, and to some other place - I just can't remember, but it's in the report. ...the site visits allowed these people - university people, public school teachers and administrators, and central office fellows - a time to talk. And as I understand it, these site visits were very beneficial at the early stage.
They came back and became a little more specific in terms of what their needs were (Amy, university representative).

The collaborative focus of this initiative changed the flavor of professional development in the SFASU-CPDT. More attention was given to partnerships and shared professional development activity. "We have an annual plan for staff development and we plan for interns, student teachers, teachers, professors, and community participants" (Myrna, university representative). Due to the inclusionary aspects of this professional development model, collaboration strategies have been targeted as a primary focus for professional development in the initiative. Collaboration is viewed as the glue that will hold the initiative together:

I see the collaboration continuing after the money is gone. Once you have started that, you can't stop. Too many people see how valuable it is (Amy, university representative).

Collaboratively, the SFASU-CPDT branched its attention into other needs-based arenas. Myrna (university representative) highlighted the Center's professional development opportunities as follows:

The Center (SFASU-CPDT) is different in intensity, in partnership, in topics, and in the level of importance it holds in our teacher education program. We have more attention to diversity, more attention to shared staff development, and certainly more technology instruction. ...We are concentrating this year, for most, on technology training. That's ongoing, but we also are focusing on diversity training, mentor teacher training, middle school education training, and planning for a major Fall conference.

Professional development in the SFASU-CPDT has became a rich accumulation of pooled resources and ideas from university and partnership school personnel.
Nacogdoches ISD was the first partner school district that became involved in creating PDSs with the SFASU-CPDT. Consequently, the Nacogdoches PDS sites were the recipients of the initial surge of technology equipment provided by state funds. Due to the emphasis given to communication, technology absorbed major attention in the initial phases of the initiative. Telecommunications were perceived as essential for implementing a field-based program:

Everyone who was field-based was so isolated from the university campus. Our students were isolated. Our mentor teachers were isolated. Our site professors were isolated. We wanted to get rid of that isolation, so we put electronic communications in place connecting the university to the public schools. I can't emphasize enough how important it is to keep that connectivity and communication link with a field-based program (Rubin, university representative).

Another interviewee expressed the indispensable value of connectivity as viewed through the lens of a university professor:

It was very difficult to get professors to want to go out to the sites and be totally isolated from the university campus. They are very sensitive about tenure and being seen on campus holding office hours. They want to get credit for that and they want to be in the loop. That's the term; they talk about being in or out of the loop. Well, one of the reasons we were able to get professors out to the sites was because they were guaranteed access to connect to campus via telecommunications on a daily basis. I'm a professor out at a site and I'm not out of the loop (Lynn, university representative).

During the first year of the SFASU-CPDT initiative, distance learning sites were established linking Stephen F. Austin State University, Region VII Service Center, and Angelina College using interactive video. Several PDS sites in Nacagdoches ISD were networked with the university campus. As the Center expanded into more school districts, building technology capacity decreased respectively with state funding. Interactive video was not installed in each new PDS. However, each PDS provided a site-based university
classroom and was equipped with FAX and modem capabilities, computers, CD-ROM, laserdisc, VCR/VHS systems, television, scanners, and technology carts.

Technology was viewed as the “carrot” (David, school representative) for the classroom teacher. It made the added responsibilities involved with mentoring university students a more attractive task. One classroom teacher expressed this as follows:

A lot of university interns who come in are real young and a lot of teachers have trouble getting along with these kids. When I personally have maybe four or five interns a semester, I get to the point where I don’t want to mess with them. You know, it’s just too much. I’ve got my own students to worry about. And then, student teachers are also in my classroom. The technology really helps. It helps you a lot to be able to work with interns because they’re knowledgeable (of technology) and student teachers come in much better prepared, too (David, school representative).

The influx of technology did not occur without frustration. Technology advanced faster than the initiative. One of the technology coordinators (Lynn, university representative) provided a story that best describes the difficulty with getting technology initiatives implemented:

I keep going back to this article that we read a few months ago in Electronic Media, the one about the car in the jungle. It’s the neatest little story. Until we started doing these kinds of things, like hooking computers up with CD ROM and LCD panels and Internet, a computer was really kind of like a car in the jungle. The author in that article said that if you happened upon an automobile in the middle of a jungle, and if you were a native who had never seen a road or knew what a car really did, you would go up to that car and you would open that door and say, “Wow!” And, somebody would say, “Start this up. You can set this button and it gets cool. Wow! Air conditioning! Neat! Reclining seats. Hey, there’s even a sofa in here. I can sleep in here. You can close the doors and windows and mosquitoes can’t get you. Turn that radio on. I’m telling you, this is great. Stereo, too.” They would look at how wonderful all the gadgets were, but never connect with what the real purpose of what a car was, which is where the wheels meet the road. That’s how a computer is. See, we tend to set it on a desk and do a little word-processing, a little database, and a little spreadsheet, but we never connect with what a computer really can do. We’re just playing with gadgets. We’re not getting the computer out on the road and going.
Well, we’re starting to do that know. That’s part of the vision. But it’s certainly a new challenge.

The technology coordinators felt that the vision of technology moved so swiftly that it was very difficult for their single initiative to keep up with the pace:

There is such an experience lag. Once we put it (the technology) in the school system, the teachers didn’t understand it. It took maybe a year or even two to get them to even start using Microsoft Word. And then they started realizing that they could maybe use LCD projectors, but by that time it was almost too late. We’d moved on to something else (David, school representative).

Rubin (university representative) elaborated on this further with his comment, “There was indeed that gap and again, I think the technology group had a little farther vision than was actually the realistic expectations from the classrooms.”

The issue of time constraints that are attached to state funding opportunities added fuel to the frustration of dealing with the complexities of advancing technologies. One of the technology coordinators who was a key player in purchasing equipment for the SFASU-CPDT described his frustration:

Where as much as you’d love to be well-researched and well-founded on all the ins and outs - what equipment’s good, what works, what doesn’t, - you can’t. Time is a real issue, the crunch factor. You just run out of time. You can’t read enough. You can’t get everybody together to talk over all the issues. And, decisions are just made that aren’t really well-informed. We love to think we make the best decisions of all, and I think we’ve come up with a good CPDT team. Honestly, we have a good product. But boy, getting there is scary. The technology was advancing quicker than we were (Lynn, university representative).

The complexities of implementing the various technologies were necessary components for promoting interaction between PDS sites, universities, and education service centers. The technologies provided an infrastructure that permitted the partners to
communicate more efficiently. This became critical as the SFASU-CPDT began to expand its boundaries:

That was all in the original vision - that the interactions at the site would cause change in the university professor, cause change in the public school teacher and administrator, cause change in the university intern, and in the final summary, cause change in the performance of students based on these interactions. Our most powerful staff development has been the principal talking to the site professor and learning from each other, and the teacher talking to the site professor and the university intern and all learning from each other. ...The most unique part of all this to me is in the minds, in the openness the attitude of the people toward change and working as a team (Joanne, school representative).

Schools in both Nacogdoches ISD and Lufkin ISD had the most voice in the beginning and set the pace for modeling collaboration. "The partners formalized a process for dialogue and at the same time, made it less formal" (Amy, university representative).

For example, site professors met periodically with mentors on the PDS campus. The site professors also met together as a group on a monthly basis at the university campus and invited PDS school administrators and teachers to share successes and address issues that need improvement. This model of collaboration has been maintained as the SFASU-CPDT has expanded to include additional PDSs from new district partnerships.

Another model of collaboration that has held strong since the beginning of the initiative is the implementation of action teams. On a large scale, the 39 member governing board initiated the implementation of action teams that met at least monthly for making decisions regarding the various components of the initiative. For example, action teams were formed for staff development, preservice secondary education, preservice elementary education, recruitment, leadership, technology, and research/evaluation. The concept of action teams was extended and implemented at individual PDSs:
The site professors are at the PDS site on a daily basis and they form action teams that continue to meet and feed each other. These action teams address site-specific issues and occasionally form ad hoc work groups. To me, the site professor and the site-specific action teams are the key to the success of each PDS (Kim, university representative).

The various collaborative efforts of the SFASU-CPDT initiative had fueled an accumulation of professional development opportunities for all its participants.

Role changes and leadership emerged in varying degrees. For example, the need for better facilitation skills were communicated as numerous committees formed. Teachers, administrators, and professors expressed a need for running meetings more efficiently and specifically requested training on consensus building techniques:

Well, it seems to me that there was a growing recognition that what we were involved in needed facilitation skills. For example, different committees came forward with a need for this: “We need facilitator training; we need training on how to better run our meetings; we need to have consensus training.” ...It’s like the people took on new roles and the new roles had demands for new skill, especially in being able to work more closely together (Amy, university representative).

Consequently, one of the first major professional development opportunities was leadership training sessions from an external facilitator.

Role changes were portrayed as predominantly influencing classroom teachers and university faculty. For the first time, site professors and mentor teachers worked together to determine the kinds of experiences as well as the content that should be presented in university coursework. Classroom teachers previously had not experienced this type of involvement:

We found that this worked very well. Instead of the university telling a classroom teacher what they wanted the student to do while in their classroom, we worked collaboratively with the mentor teachers and basically, based on their input, determined the kinds of experiences for the content. The mentor teachers were
willing to meet with us periodically to give us feedback (Molly, university representative).

As the classroom teacher took on more responsibilities with university coursework, they also became more engaged in mentoring opportunities. The mentor teacher training was delivered primarily by site professors who had attended specific training-of-trainer sessions. Implementing mentoring strategies has resulted in rich professional development opportunities for mentor teachers. One staff development coordinator discussed these opportunities as follows:

Mentor teachers have become more aware of their practices. They are more engaged in professional development. They read more educational information. They are wanting to do things differently. Proposals I get from teachers to make a change or do something new are now usually from our mentor teachers. They are beginning to think of innovative ways to improve their instruction (Joanne, school representative).

Mentor teacher selection was a unique collaborative process in the SFASU-CPDT. The school districts provided input outlining criteria for master teachers. Then a team of teachers was selected to review mentor teacher applications and determine which teachers would make effective mentors. As the process for mentor teacher selection unfolded, the vision was revisited:

If the real purpose of field-based instruction is to improve what students learn, this also means that we need to focus on improving all the teachers, not just the teachers at the very high “master” levels. If you are going to improve your staff and you’re only providing opportunities to your very best teachers, your ideal teachers, then you’re really not improving the teachers that need to be improved. I think that now what we look for in a mentor teacher is someone who is willing to change, wanting to improve, and willing to question their own practices (Robyn, school representative).

Technology training opportunities were another professional development highlight shared by respondents. After the equipment was purchased and installed, intense training
began and was delivered in a variety of ways (Rubin, university representative; Lynn, university representative; John, university representative; and David, school representative). Weekly training sessions, intensive summer institutes, and annual conference technology strands were implemented over the past three years and have impacted university interns, mentor teachers, and university professors. Topics have ranged from basic computer skills to curriculum and technology integration for diverse classroom environments. For example, interns and mentor teachers were trained in using word processing and graphics software for writing reports and preparing lesson plans. Training on database software was delivered for cataloging student reading materials. Internet training was provided to discover valuable teaching material for classroom use, especially in the field of science. PDS classrooms had student access to information via CD-ROMs and laser disks. Training sessions for telecommunications and distance learning technologies resulted in enhanced communication between the university and the schools. University professors received one-on-one training to develop expert skills and then delivered instruction to university students in the field. Administrators at the different partner sites used the system to hold meetings and improve communication.

The various technology training components were perceived as on-going and were delivered internally by the SFASU-CPDT technology specialist and select site professors (Lynn, university representative). The SFASU-CPDT technology specialist was hired mid-year in response to the purchase of technology equipment that drove the need for increased support. The issue of support for physical hardware, installation, repairs and training was perceived to be an on-going concern (John, university representative).
Follow-up was reported as occurring at each PDS, usually by a site professor or participant who had received the appropriate training. However, as technologies continue to expand, the demand on needed expertise is perceived as increasing beyond what is currently available (John, university representative).

In addition to the focus on collaboration and technology, other professional development highlights that have occurred over the past three year period include: (a) trainer of trainers session for Demming's Total Quality Management (Demming, 1982), McCarthy's 4-MAT curriculum training (McCarthy, 1987), and Facilitation/Leadership training; (b) state and local conferences on diversity; (c) Fall and Spring CPDT retreats; and (d) summer institutes, including a 1994 Summer Institute for the Leadership Development Program (SFASU-CPDT, 1993-94). The Leadership Development Program was developed to address the Texas Education Agency's newly adopted proficiencies for administrator preparation (Myrna, university representative). Indicators and critical attributes of the proficiencies were developed and an initial cohort of individuals were selected and trained to serve as mentors for the new design for administrator preparation. To supplement this program, a technology component was added for creating electronic leadership portfolios:

We field-base our leadership development program just like we field-base the undergraduate program. And so one thing that we're (technology coordinators) doing is buying equipment and ramping up to do field electronic portfolios for our administrators in training. ...By the end of the summer our goal is to have some CDs pressed that these administrative students can use for job interviewing, whether its a video, papers written, papers read, resume, certificates, references, etceteras. We're using technology to make this happen (John, university representative).
The professional development highlights mentioned are merely a sampling, not an exhaustive listing. The following models of delivery describe the processes use to disseminate the various professional development highlights.

Initially, professional development opportunities tended to be implemented by external facilitators. SFASU-CPDT staff development facilitators found it important to screen outsiders carefully and know their credentials. They also found an emerging commitment to build internal capacity of their own people. This had a double benefit. Not only did it provide leadership opportunities for their own people, but it also became more cost effective because they could share in-kind services with each other. Mentor training was one example provided that indicated success with internal facilitators:

I think it has been much more successful using site-based professors for training our mentors than pulling anyone from the outside. An outsider would bring in a canned program that couldn’t even begin to zero-in on site-specific needs (Amy, university representative).

Professional development follow-up strategies were illuminated through mentor training. For example, a group of mentors at one elementary PDS met weekly with the site professor and formed ongoing study groups and support group sessions. Technology training also provided a follow-up model. Like the site professor, a technology person at each site has been trained in depth to provide support and coaching. The site professors play a very active role in professional development opportunities that occur at each PDS. For example, one site professors stated:

Many of the public school teachers had had training in a lot of areas that we (university professors) had not had opportunities to receive training in. So, part of our site-specific plan was to make sure that we were able to get those experiences. This has provided an opportunity for us to feel more comfortable in the public school setting (Molly, university representative).
As a result of shared staff development, public school teachers and university professors presented at conferences together and have teamed to deliver staff development. The variety of shared activity that has occurred was portrayed as exciting and indicative of personal growth. However, it was also revealed by one participant as having the potential for creating symptoms of burn-out:

You know, we are a small university working with small school districts. So, there is just X number of people to do all the work. Sometimes people may have felt a little thin. Particularly at the beginning, when you were expected to be on more and more committees. And the spring and summer that we did the initial grant writing, well, we all were carrying 15 hour loads that spring and all of us were teaching all summer and then doing this on top of it all. Of course, the public school people were in the same boat, except during the summer. They were more accessible to help us (Kim, university representative).

The field-based model of the SFASU-CPDT has been the foundation from which various professional development opportunities have emerged. The collaborative nature of shared professional development has changed the way teachers, administrators, and professors teach. One interviewee summarized it as follows:

It’s not the individual workshops and training sessions per se that have created the professional development component of this initiative. It’s change. Change in the way people do things. Change in the way they interact. Change in the way they practice their skill for the art of teaching. The whole field-based model was the basis for staff development. It was not the workshops. It was on-the-job type of training where the people came together and learned from each other (Joanne, school representative).

The changes in the way teachers, administrators, and professors “do things” has effected university and K-12 students:

The very first noticeable change when we started getting feedback was when the (university) interns went into student teaching. The first group of PDC interns that went into student teaching on another campus - the principals, teachers and all the management was saying, “This is the very best student teachers we have ever had.
WE have never had a group of students teachers this good.” So, it was noticeable that the interns had self confidence. They came into the student teaching classroom-ready (Joanne, school representative).

As for K-12 students, actual evidence of improvement was in research phases, however, K-12 students were perceived to benefit from exposure to new technologies and “all the additional attention” (Amy, university representative).

Center for Educational Development and Excellence

I initiated data collection and analysis for the Center for Educational Development and Excellence (CEDE) by gathering statewide reports such as final reports (Center for Educational Development and Excellence [CEDE], 1993-94; CEDE, 1992-93) and program application documentation (CEDE, 1995). Due to the complex organizational structure of CEDE, the reports aided me in understanding the multiple university and public school partnerships. One report in particular, a report presented to the San Antonio ISD Board of Education, summarized CEDE as follows (no date available):

CEDE is a collaborative community, a center of inquiry dedicated to continuous life-long development of teachers as learners in a culturally diverse, technologically enriched, educational environment. CEDE is dedicated to serving the teachers of the greater San Antonio and South Central Texas area with innovative teacher education programs that are field-based and technology oriented.

CEDE is an unparalleled collaboration among educational and community institutions in San Antonio. CEDE partners represent five institutions of higher education (one public and four private), four independent school districts (including a representative range of students and types of schools in the San Antonio area), four private schools, the regional Education Service Center (ESC), the local community college district, and the San Antonio business community. This partnership enables CEDE to affect the professional development of teachers in a coordinated community-wide manner. It is anticipated that in the future all school districts in Bexar County will participate with CEDE.

In the San Antonio Independent School District (SAISD), CEDE is operational in seven (7) schools that are designated as Professional Development Schools (PDS).
(According to the quarterly report filed at the end of the second year, August, 1994, the number of PDS sites had increased to include nineteen PDSs and three partner sites)

Mentor teachers and CEDE coordinators have been identified at each PDS. These SAISD staff members are receiving TENET (Texas Educational Network) and other technological training at ESC through CEDE funds. Each PDS site planned the operation of the CEDE program with the partner university; therefore, each PDS has a unique CEDE program. In the planning process, the needs, goals, and existing equipment and training were considered and built upon to maximize the impact of CEDE.

CEDE is governed by a Board of Directors and Executive Committee, supported by a small staff. As its overriding objective, the governance structure focuses upon the ongoing development and implementation of collaborative processes that integrate technology and innovative teaching practices to meet the needs of a culturally diverse student community in an experiential, school-based teacher education program.

CEDE began to take root in 1992 when phone calls were made by Robert (university representative) to neighboring institutions of higher education in regard to the statewide Request For Applications (RFAs) that were sent out to create Centers for Professional Development and Technology (CPDTs). Faculty members from Incarnate Word College, a private institution, were initiating the writing of a proposal in response to the statewide RFA when Robert (university representative) contacted them. Lisa (university representative) recalled the phone conversation as follows:

Look. Everybody got one of these (RFA). We have thought it through from our standpoint and we think that if UTSA could pull together all the universities, we could form a consortium and work together instead of against one another. Our chances would be good not only of getting the grant, but of really changing education in Bexar County.

This was the beginning of the consortium that eventually became CEDE. Five universities joined forces in response to the statewide RFA. The process of collaboration between four private universities and one large public university involved many challenges:
You need to understand something about these universities ... and the social structure of the city which is that three Catholic universities have been here from the word go, since 1860. And they have sort of bonded together, one being for males, St. Mary’s, and two being for females, Incarnate Word College on the northeast side, and Our Lady of the Lake on the southwest side. But these three universities had worked together and served a segment of the population which is Catholic. ...Well, Trinity University was conceived of in the ’30s and, or before that, and brought here from Waxahachie. And it’s Presbyterian, but it’s formed a coalition between Presbyterian, Episcopalian, and probably Methodist. So, it was the Protestant alternative. Nobody likes to say that, but I’m not afraid to tell you what it was a long time ago. ...The point is that the five universities had never cooperated on anything. Okay? Nothing. I mean we did it on the surface ...but there was always this underlying competition. ...Higher education is in a very competitive market. And how is private education going to compete with UTSA. UTSA is a very threatening entity to the private universities here. It’s very young. Remember, it’s only 20 years old. And so when it came to San Antonio, it cut into what everyone else had as an assured local market (Lisa, university representative).

Jill (university representative) expressed similar skepticism:

...And I think that probably from the private school perspective, my sense was that there was some skepticism about, “Oh geez, this is just the big university (UTSA) trying to call us and trying to take us over and run with it.”

However, both Jill and Lisa shared how the challenges of forming the CEDE consortium led to collaborative heights never before reached among the institutions:

Anyway, what this five university consortium did was bring us all together and we stopped being afraid of one another. And so it is the first time all five education entities shared what we were doing (Lisa, university representative).

I don’t think there had been very good relationships among the institutions until that point (forming of CEDE consortium). ...I mean it was like, “Let’s do this. Let’s do some things together. Let’s see what kinds of conversations we can have.” And so we did (Jill, university representative).

A planning grant was awarded from the state funding agency and the five universities began a series of meetings involving two or three representatives from each of the five universities and within a month, they had formed a coalition and began carving out their
vision. The driving force underlying their vision was to improve preservice education, provide teaming skills and technological skills for future teachers and helping them become more aware of the ethnic kaleidoscope that exists in school cultures. In order to accomplish this mission, the consortium members agreed that college faculty members needed to interact more with classroom teachers to redesign teacher education programs. As a result from these meetings, a retreat was planned that involved university faculty from the five institutions, public school teachers and administrators from a selection of larger school districts in San Antonio, and representatives from the community college district. External facilitators were brought in to lead vision building activities:

We hired, oh gosh, ...(facilitators) ...and they really did a fine job. And so we carved a mission statement at that time. At the end of the retreat we really came out with a very good mission and we came out with our name CEDE, which is the Center for Educational Development and Excellence. But it's also done in Spanish (Centro Educacional Para El Edsarrollo Y Excelencia) and the term CEDE means to join together. ...And so anyway, we came away with a lot of thoughts established. You know, like how could we all work together to address the needs of our very diverse community, predominantly Hispanic, and at the same time infuse and be able to use technology as we are preparing teachers. And truthfully, that was probably the most difficult piece. We all had a sense of what we thought the needs of the community were, but the technology piece was just... Well, we just didn't know what or how it would take shape” (Jill, university representative).

CEDE was granted funding to develop a Texas Center for Professional Development and Technology. A CEDE executive director was hired to oversee the executive committee, which began meeting monthly to run the operation of the center. The governance structure of the executive committee remained 50% public school people and 50% university faculty. The executive director position was eliminated in 1994-95 due to reduced state funding. However, the head of the education division or department at each
of the five universities formed a steering committee and Robert (university representative) became the executive director of the steering committee.

The region Education Service Center (ESC) became a partner in the CEDE consortium. They were invited to provide consulting services regarding technology:

Basically the way I remember it at the very, very beginning was dragging us in and as we were sitting around as a center (ESC) and talking about the status of technology and professional development schools and teacher education institutions, we were actually thinking about five-year strategies for impacting that. First, you've got to build the relationships, get your foot in the door, and gradually move people along. And so that was one of the areas that was really on our minds because what was happening was - we felt that we were training teachers who were in place (in the schools), but we didn't have our finger in the dike. We kept getting teachers out (from the universities) who had no technology experience. So when the state brought the money forward and said, "We'd like for some collaboration to happen," and we were contacted by the universities, we jumped at the chance. I really literally put everything else on the back burner and said, "This is a chance not only to make it work, but to accelerate the process." ...What really attracted us was the opportunity to impact technology at teacher education institutions (Richard, ESC representative).

As soon as the funding was made available from the state funding agency, the purchasing of technology equipment took precedence. Regional ESC members became CEDE's technology consultants:

As soon as we (CEDE) were funded and we started having to talk about purchasing technology, then we (ESC) became full-blown consultants to CEDE for writing all the specs. We wrote specs. We wrote bids. We worked on video conferencing equipment. We worked through the purchasing office at UTSA (Richard, ESC representative).

Consulting the technology arena for CEDE was not viewed as a simple task:

I don't think there was anybody else in the collaborative who understood the specs. ...We went through those together and it was like a new master's degree. I mean, it was hard. ...they relied heavily on us, especially in start up. But, I never dreamed that we would play the role we played in CEDE - for technology. It ended up, any question that there was came to us. I mean, there were times when there was a lot of difficulty caused at the center (ESC) because there were things that we needed to get on to and on with (Dana, ESC representative).
The entire consortium was involved with the technology piece. Each university program independently worked on revising their teacher education program to be more field-based and technology rich. However, they all worked together in terms of technology and training. The ESC served a major role in infusing technology into the initiative. Support issues across such an expansive arena were perceived as difficult to maintain:

I don’t think we have really changed instruction with technology. ...it’s because there weren’t enough people to do what we needed to do. I mean, it was our intent with Dana all along. The whole reason for bringing her on is because she’s good at designing instruction with technology support and teaching people how to do that. But there’s so few of us and we’ve been swamped with lower level stuff and trying to develop capacity that we’ve not been able to get to it (Richard, ESC representative).

As professional development schools began to emerge, technology continued to play a significant role in the CEDE initiative. Over the course of two years, interactive video capabilities were made available in thirty CEDE sites including universities, region ESC, and PDSs. Seventeen of the sites had interactive video units on-site and 13 sites were installed with a special line service that allowed them capability to check out desktop interactive video units from the region ESC or their partner universities (quarterly report data). Every PDS campus and college of education also was provided with satellite down links. The purchasing and installation of the extensive amounts of technology equipment was on a limited timeline. Richard (ESC representative) stated that most of the technology was “forced and designed and contrived and shoved through” and he couldn’t “think of any of it that was easy”:

...probably one of the most frustrating parts... well, I don’t know if frustrating is the right word... but we found out that, you know, when we wrote the proposal originally, we said we were going to buy these interactive video units or compressed video units and we’re going to use them. Well, it took us almost two years to decide
on what we were going to buy and when we were going to buy - that equipment is really on the cutting edge and it’s changing so quickly. ...to be real honest with you, some of it’s working well and some of it isn’t (Robert, university representative).

I think something else that drove that area (technology) is the fact that with that amount of money coming in, there was the idea, the vision, that we could mold something that was more leading edge. And we could look to technologies that were not firm out in the world - so to speak. We suffered through that because getting out on the edge, we ended up not being able to find anybody that knew anything about those technologies (Dana, ESC representative).

Due to the focus on equipment issues over the initial two year period, implementation of training for the “use” of the technologies was delayed. The video conferencing equipment was put into a “demo mode”, used primarily for “promotional” purposes (Richard, ESC representative). Levels of exposure to new technologies had been increased, but practical use was not perceived as being exhibited:

They (teachers and university faculty) are coming through with some basics. They may not be comfortable yet, but they’re coming through with basics. But they haven’t stretched to the using of it. Part of this is time. I mean, we’re looking at something - I mean this whole project is what? Three years old? And to imagine that sort of entire restructuring for the number and variety of types of people that you’re dealing with? We really needed to look at something that was more of a long-range plan and look at some milestones and say, “Are we headed there? Are we headed that way?”, not, “Are we there yet” (Dana, ESC representative).

Technology training efforts reflected the challenges of new technologies. The technologies that blossomed during the first year of capacity building were advanced beyond the capabilities of the PDS participants:

We just thought, “Well, here we go. We’ve got some money to deliver training. We’ve got a chance to make a difference at the colleges of education - one of our visions. This could have a long term effect. Rock and roll! Man, we had no idea how much training there was to be done. You can’t imagine how many times we said, “Here we go again. Here’s Mr. Diskdrive.” I mean, we were supposed to be teaching them how to teach differently with technology and we couldn’t even get past, “Here’s Mr. Diskdrive” (Richard, ESC representative).
Training emphasis eventually led into integration phases, but the degree of implementation was scattered and site-specific. Diane (university representative) was a leader in CEDE's professional development planning and delivery across various sites. She shared a specific story that revealed an “aha” experience regarding the integrating of technology at one of the PDS sites, illuminating how teachers began using technology as a teaching tool:

Technology is something that to me was the greatest struggle. That first year, I mean the region ESC was great for us as far as setting up overviews of what’s happening in technology, etc., etc. ...we had an entire semester of looking at the big picture and that was probably important. But it was real interesting. In the fall when it was time to start asking what kind of technology training each campus wanted - I literally went to schools with that question. Well, it was like we had never had any kind of technology overview. Teachers did not have a clue. I mean, I remember sitting there and saying, “Well, what kind of technology training do you want this year?” And there was absolute silence. Painful silence. And so it finally dawned on me. I stumbled across the question. At the end of that meeting when most people had disappeared, a few of us were hanging around talking and I said, “You know, what we really need here is to come up with a project into which we can integrate technology.” ...So, for the first time, I realized what you really have to do if you want these people to use the darn technology - it has to be integrated into something meaningful for them (Diane, university representative).

In Diane’s example, technology was integrated into a literacy program that emphasized the use of word processing for reading and writing projects. She also shared a unique community research project that was also used to integrate technology into the curriculum:

One school, which is located across the street from a housing project in which 99% of the children who go to the school live in that housing project. At the ends of the buildings, two-story buildings, throughout the course are these huge murals. And the murals depict, oh, Hispanic scenes, I mean they could be historical, they could be political, they could be social, they could be religious. But there’s something like, oh, 60 of these huge murals throughout the course. The kids wanted to study them. So, you have all kinds of opportunities to integrate across the curriculum in studying the murals. So, they developed - they integrated - they pulled all the information together
into these multimedia presentations. And teachers didn’t hesitate to jump in. I mean, the fact that they didn’t know how to do multimedia presentations didn’t particularly bother them. ...I think the point I am trying to make is that we only got somewhere with technology when we were really concerned with something else (Diane, university representative).

A group of teachers from one of the PDSs had received external training on how to use a storyboard for initiating technology projects. The results from the training provided another example of how teaching a meaningful strategy resulted in implementation:

It (the storyboard strategy) taught me how to think in another way. The flow chart - it’s such a neat way to see things happen because you start with this idea, and technically when you are working as a group of teachers, you are going to branch off heavily into the area you represent. So one of the things the flowchart and storyboard taught us was how to organize so that one thing - every area gets the same weight. We use storyboards for everything now (Lynette, school representative).

Ted (school representative) summarized the integration of technology as follows:

The technology is being used. It wasn’t just taught to us. But it is being used in the classroom now and there’s plans to use it in the future. So, it’s become just like a textbook. It’s become part of the classroom. That’s what I really find.

Professional development opportunities continued to unfold at each PDS. At some sites, technology remained the motivating factor for the participating teachers. At other sites, personal financial gains were motivators:

We have a percentage who were motivated and committed and they are using it (technology) and pushing it. We have the biggest majority who took this as an opportunity because they may have been paid a stipend or they may have gotten some time off. And then there’s the ones that somebody asked them and they didn’t know squat about anything and figured it was a chance to learn something (Dana, ESC representative).

All professional development opportunities were perceived as developing under an inclusionary umbrella, with intent of influencing the learning environment for school
children by providing professional development opportunities for classroom teachers, building administrators, university faculty, and university students:

There's been cross-training. I mean, we've had inservices where the schools have invited us, and so you've got university professors, school faculty, university students all working in the same area (Jill, university representative).

As barriers were broken across the groups of CEDE participants, they began feeling less isolated:

CEDE has really helped us open lines of communication that would have never been opened before. ...I'm no longer afraid to try a lot of things and have failure in my classroom and then come and talk to my peers about it and get ideas from them and generate on my own what needs to be done in the classroom. ...You can listen to what other people are doing and you can incorporate that into your own, whatever you're doing (Tony, school representative).

University participants also expressed experiencing less isolation due to the collaboration component of CEDE:

Personally, for me, it (professional growth) has been the collaboration with the people at the other institutions. I mean, I just believe very strongly in that. And in fact, I've been hesitant to write or do presentations on my own because I feel everybody should be involved (Jill, university representative).

In the original vision, connectivity via telecommunications was predicted to facilitate collaboration and reduce isolation among the sites. This plan was perceived as not evolving to the extent that it was planned:

The idea was that they (university representative) would reach more of their mentors and their student teachers at the same time. ...They could look in on them. They could collaborate with them without necessarily having to travel that distance all the time. So, it was a time management tool in essence. ...That was the vision. Did they (use it)? Yes, a little. But not too much (Dana, ESC representative).

We only have the one line and there are probably six to eight teachers at this point, I guess, that are comfortable with it (telecommunications). With just one line, there was limited access geographically or logistically, whatever you want to say. Not as
many people got as much use out of it as we had hoped at one time (Vicki, school representative).

Breaking down barriers of isolation appeared to depend most on face-to-face collaboration with some technological support:

Professional development highlights consistently reported by respondents centered around various avenues for implementing technology:

I think technology got a lot of attention only because it was such an unknown. We could talk about effective teaching practices. We could talk about being more field-based. But the technology piece? Well, we just didn’t know what or how it would take shape (Jill, university representative).

Other major sources of content for professional development centered around: (a) mentoring skills for supporting a field-based program, (b) strategies for teaching to diverse populations, and (c) collaboration skills. Each PDS site took on a unique focus that directly and indirectly addressed these major content areas:

We asked each school to identify a focus around which collaboration would occur. We had a whole range of things. At one school there was a literacy focus. Two schools identified as their focus early childhood programs. We had one school that identified as its focus the development of integrated curriculum that would utilize community resources - like the Natural History Museum. We had at least one other school that identified as its focus thematic instruction. ...Some of the schools, you know, they kept sort of shifting (Diane, university representative).

As university students became more a part of each PDS, they also became a part of the specific focus of that site. Staff development needs for learning how to mentor university students were addressed:

Well, one of the things, well the main - we sent out a survey to all of the teachers as to what our weaknesses were with our preservice students. And of course, one of the biggest things was classroom management. They felt like we needed - they needed improvement on their classroom management. And the teachers were not real sure what to tell the preservice students. ...So what we’ve done is design a manual - and
what we’ve done in the manual is just put together some discipline models to where, just suggestions that they can give to the preservice teachers.

...There was also a concern about cooperative groups. The preservice teachers were losing control of the cooperative groups, so we’re going to include a section in there concerning, you know, how do you build groups and make them work efficiently.

...one of our faculty members here on staff, that is one of her areas of expertise - is mentoring. And so she had a lot of input into the manual as far as positive things to say to the student, how to conference with students, those kinds of things (Teresa, university representative).

Attention to diversity was perceived as a natural, on-going focus:

Yes, technology and mentoring have been main areas. ...the diversity and inclusion - you know, I had to talk about this at the state when we made our presentation. I think it is real important to understand that diversity and inclusion is so much a part of the San Antonio area that we don’t even think anything about it. It’s not that we ignore it. It is so much a part of every single solitary staff development, every single solitary class I teach, everything, that I was having trouble answering some of the questions. And it was really hard, and I was thinking, “Why is this so hard?” And it finally occurred to me, “This is a problem for these people. It’s not a problem for us” (Lisa, university representative).

Models for delivering various professional development content grew out of the implementation of the field-based teacher education program. “One thing we needed to do was revise our teacher preparation program and make it more field-based and also to make the professional development for those already in the field more field-based” (Robert, university representative). One of the areas that was enhanced due to the field-basing component was multicultural education:

Most of our PDS sites are in inner-city schools and a lot of them (university students) are getting experience with diversity, especially Hispanic populations. I think that the fact that they (university students) are spending more time in the schools and our faculty out in the schools are spending more time with them (university students), I think that that’s going to be much more helpful (Robert, university representative).
One avenue for multicultural training was statewide conferences. However, one of the most effective training tools for university students was perceived as “getting a lot of hands-on experiences right in the schools where the school population is 90% to 95% Hispanic” (Robert, university representative).

Statewide conferences and local summer institutes were reported by respondents as one type of professional development opportunity. For example, for three years CEDE has sponsored a summer institute for high school students and university students. The purpose of the institute is to encourage more minority students to choose teaching as a career. The institute is uniquely organized with one strand for high school students and another strand for university students:

This year we’re going to select 100 high school students and we’re going to have two sessions for high school students. And we’re going to only have the high school sessions two weeks each and the college students, theirs will be three weeks. The first week, all the college students will be together, and then half of the college students are going to work with the first 50 high school students for the next two weeks; then the second half of the college students will work with the second half of the high school students the next two weeks (Robert, university representative).

The university student takes on a professional mentoring role with the high school students:

We’re asking the university students to do a lot of things now, a lot of mentoring kinds of things. Instead of the university faculty doing it, we’re training some of the college students to mentor. So, they’re going to actually have some experience teaching and working with students (Robert, university representative).

Another method of professional development delivery that emerged was the development of training cadres. Due to the number of partners in the CEDE collaborative, selecting a target group of university faculty and classroom teachers to
receive training and deliver training was necessary. "We couldn’t deal with the numbers
any other way" (Lisa, university representative). The cadres were organized as follows:

It (the cadres) unfolded basically on the pattern that we used in the district before. And we had universities choose teachers at each campus who would be part of that subgroup. And they were charged with the idea that they would come in, receive certain amounts of training at different levels. And it was very structured. And in between times there were meetings and things like that so there was a lot of contact with them. As they went through the training series, they would be trained not only in the use of the (technology) equipment and the software provided, but also in ways to train - the actual training of adults. And each university chose one or two people from each campus. It became the group and then they were worked with separately, separately while at the same time they were part of the large group. They (the cadres) were pulled out at times for specific trainer of trainers sessions. Some of them received stipends (Dana, ESC representative).

Vicki (school representative) shared the following example of a technology cadre of
trainers involving her school:

When they first brought Internet lines, the phone lines in, when they first brought that in, I know that CEDE facilitated bringing a teacher from every campus in to be trained on how to use the Internet and then to go back to the campus as a trainer to the rest of the teachers.

The process of developing training cadres did not occur without some challenges. Selectivity itself was an issue:

Because we had to reduce the amount of people involved, the training didn’t qualify for in-service with all the rest of the schools. And once you start pulling teachers out from the regular in-service workshops and work with them, you start a class-system situation which the principals, quite rightly, would not support (Lisa, university representative).

Another thing that happened to us in reality was at the school sites and the university sites they picked the people that were the most active and on the cutting edge and the most busy. And they sent them to be trainers. And so when we trained them, even the ones that survived the whole thing and did super well, they went back, but they had more duties than they could ever think about doing and nobody was about to release them to train (Richard, ESC representative).

Scheduling nightmares also provided a barrier to staff development:
The biggest obstacle in professional development for the university faculty and for the classroom teacher, not for the preservice teachers, has been the technology. ...Because it is the most difficult to schedule. Not because people can't learn. It is the scheduling. So, the culture of the university and the culture of the schools - the time, the people, the rules, di-di-di-di-di, - are absolutely a brick wall against which somebody has to just bore through in order to set up technology staff development (Lisa, university representative).

Richard (ESC representative) and Dana (ESC representative) both shared that the trainer of trainer model "looked real good on paper." They felt that the concept sounded good and the design was good. But, they didn't feel that it had "really worked out the way we expected it to work" (Dana, ESC representative).

The region ESC served as external facilitators for the technology training that occurred in general across all the PDS sites. Their expertise was perceived as essential to accomplishing the technology mission of the initiative:

It's all so new that it's hard to find somebody that can come in and you can tell them what you think you need, but you need them to really verify that for you. ...It's like you've got to know what you don't know. And that's hard. And so it's having someone help identify that. The regional (ESC) has been very, very helpful (Jill, university representative).

Other areas of expertise were initially provided by university faculty. For example, one PDS had a focus on literacy, and a university faculty member from the reading department provided staff development for the teachers in that school. Another PDS chose an early childhood focus and therefore, had an early childhood faculty member providing expertise. There were also occasions when external expertise was brought in from outside the collaborative. For example, a woman from a community agency provided expertise for one PDS on doing community research projects.
Professional development progress of PDS participants did not continue to depend so heavily on external expertise. A shift to using more internal expertise emerged:

You know, that first year Jill and I went and did almost all the staff development in the PDS with the literacy focus. But for the second year, for the Read Aloud Program, they hardly called upon us at all because they, you know, were developing their own expertise and they had people that they could call on - like the assistant principal, who was doing a lot of the literacy stuff (Diane, university representative).

The technology training appeared to be an exception. The majority of participants continued to seek expertise from the region ESC, not from their campus trainer:

They (trainees) seemed to fall back onto coming to the region ESC for training as opposed to looking to their trainers, even when we would talk to them and say, “Well, have you talked to so and so on your campus?” “Oh no, we just want to come to you” (Dana, ESC representative).

Now what I do think is that they (each PDS) ended up with a resource person on their campus. You know, someone to tell them what button to push - etc. They (cadre members) ended up working mainly in that capacity. ...But as far as (cadre representatives) delivering structured training, that didn’t happen very often (Richard, ESC representative).

Another method of providing professional development to a large audience of preservice and inservice teachers was the development of manuals, known to the teachers as the CEDE modules. The manuals were designed by university faculty to address the needs that the PDS classroom teachers were identifying:

We sent out a survey to all of the teachers as to what our weaknesses were with our preservice students. And of course, one of the biggest things was classroom management. They felt that they (preservice students) needed improvement in their classroom management and the teachers were not real sure what to tell the preservice students. They knew that they (preservice) couldn’t control the kids, but, you know, their style wasn’t working for the preservice teachers. So, what we’ve done in the manual is just to put together some discipline models to where - just some suggestions that they can give to the preservice teachers. ...One of our faculty members here on staff, mentoring is one of her areas of expertise. And so she is having quite a bit of input into the manual as far as positive things to say to the
(university) student, how to conference with students, those kinds of things (Teresa, university representative).

Professional development opportunities were shared that tended to be less structured.

The classroom teachers experienced improvement in their own teaching by working with the preservice teachers and by reflecting upon their own practices:

Well, with our preservice teachers - it (reflection) is definitely happening. They are required to reflect on what they’re doing, and they’re required to keep a reflective journal. ...I think the teachers, because they’ve got someone in the classroom watching their every move, they reflect on what they’re doing and what worked and what didn’t - so that it won’t happen again. So, I think all the way around - it’s happening (Teresa, university representative).

A group of teachers shared with me what they experienced by “being watched” so closely.

Lynette (school representative) summarized it as follows:

The reason I say professional development is because we learned to be mentors to each other and we learned how to be more cohesive in our planning and we got that vision down to where it’s real tight. ...We all know where we’re operating from and we don’t agree on everything, but we got into that mindset of how we want to get to that final destination. But until we were really put through the process, and had people watching us - you know that’s very nerve racking for teaching because they used to tape us a lot. It makes you really think about what you are saying.

The “process” Lynette talked about was not formal training, but instead it was the collaborative process of learning to work together:

Yes, I learned to be computer literate, but still the professional growth came, too, from the processes. You grew professionally. You mentored each other. You bonded better with each other, and just a lot of things came from being put through those processes (Lynette, school representative).

The teachers also shared that a “wall had been built” (Lynette, school representative) between themselves and the uninvolved teachers in their building. They were a core group
of fourth grade teachers selected to participate with CEDE, basically through implementing a community research project using multimedia. They had volunteered:

Sometimes there's almost a little wall that starts to be built because fourth grade is always busy and doing this project. But, I don't want to say that because that sounds a little negative, but at the same time, obviously we really do know more. CEDE has taken me from someone who didn't even know how to turn on a computer - to doing multimedia. But, yet, the wall has been built between us. I think that if they (CEDE) were going to do something again, they need to make sure to incorporate every grade level - at least in a piece (Lynette, school representative).

The classroom teachers also describe this professional growth that came from having university students in their classrooms. Lynette (school representative) stated, "I think that it's a really neat feeling when you are part of somebody's professional career, like a student teacher." Lisa (university representative) elaborated on the empowerment that she believed was happening with the classroom teachers:

And giving them (teachers) that power then carried over so that they took on some responsibility for the preservice teachers that they didn't have before. Before they had seen them as guests; now they have an investment in them. I think it professionalizes them. It would me.

Due to the increased involvement between teachers and student teachers in CEDE's field-based model, university faculty also had increased contact with classroom teachers. Leon (classroom teacher) described the multiple levels of involvement as “no longer being a ladder”, but instead a “network” of people learning from each other:

And you need to take this one step further and talk about our school children. They teach us as much as we teach them. They teach the student teachers and they even teach the professors (Vicki, school representative).

And this is so true, because I remember when we were trained in Hyperstudio, while we were learning, our kids were learning. We weren't actually teaching them. We were learning together (Leon, classroom teacher).
Lisa (university representative) also perceived the networking of learners as having influence on university faculty:

The most important thing was that they (university faculty) would now be - the word that comes to my mind is - public. That there were no more hiding places. ...So many of them have been isolated from the community - the needs of the community - for 20 years...

...You have people that have been teaching ed. psych or history from those yellow notepads for fifteen to twenty years. And they don't even know what's going on in the schools. And so that was the biggest challenge. ...the university professor has not been at a cultural level which has much input from the community.

So, by field-basing the university students, opportunities for university faculty to connect with the schools and the classroom teachers emerged. Once the university faculty came into the school arena, the teachers were able to share with them how things had changed:

I think when the (university) faculty got out into the schools, they not only observed what was happening with the students, but they observed what was happening with the faculty - you know the classroom teachers, the specialized teachers - like the technology teachers. This really opened their eyes (Lisa, university representative).

University faculty and classroom teachers actively involved in the CEDE initiative experienced a variety of role changes. University faculty were perceived as spending more time brainstorming with classroom teachers. They also had become an avenue of ongoing support for the classroom teachers:

Mostly, where we met with the professors a lot was for brainstorming sessions. Those have been very intense (Ted, school representative).

...the professors are here a lot. They're here to see how we are doing. Do we need anything? Are there any areas of staff development that we need? I mean, I just got a memo from Dr. Diane about training fifth grade for Hyperstudio, which I passed on to the fifth grade teachers. And so they're always here to see what we need and where we're headed (Lynette, school representative).
As for classroom teachers, they have experienced role changes and benefits from what Lisa (university representative) best describes as the “listening model”:

...you know, teachers have had this horrible thing - they’ve had 10 or 12 different things dumped on them. Everybody says, ”I know how you should be doing it. Let’s come out here and I’m going to show you way number 13.” And they just roll their eyes. That’s how they feel about in-service. I know all about it. I taught English for 15 years. I felt the same way. I always took a really good book and put it inside my manila folder and read. I mean, they were boring. They’re not effective in the way that they’re normally delivered. And so I think that what teachers saw was that they not only had an investment (with preservice teachers), but they had a real voice. They could be the experts and we (university faculty) could listen. And I think that’s a critical part of it, and I would guess that universities and/or CPDTs which didn’t build themselves on that listening model are not going to show the long-term success that the rest of us have.

As teachers and university faculty experienced working together, they also experienced a shift in responsibility:

In other words, the teacher and the university faculty are working more closely together. They (the teachers) are responsible for part of the grading of the (university) students. They are responsible for modeling good teaching practices. So, a lot of the responsibility has shifted from the university faculty to a joint responsibility with the teacher. I think that’s the biggest change (Mendy, school representative).

Professional development opportunities have evolved within the CEDE collaborative and have led to pervasive changes in the way learning occurs across all levels of learners.

Instructional content and delivery has been restructured and continues to go through ongoing changes. Diane (university representative) summarizes this process as follows:

I think our staff development and program development efforts have led to changes in the instructional context so that we’re helping to create context, educational context into which we want to place our students. In other words, as we have, you know, better and better instruction in these schools, that our (university) students that are going out there are seeing better and better instruction. To me, that’s the real connection.
I collected numerous reports and artifacts from various entities involved in the Panhandle - South Plains Center for Professional Development and Technology (PSP-CPDT). I used these documents to support my description of this multi-entity collaborative. The following description is taken from South Plains CPDT annual reports and quarterly report attachments (Panhandle South Plains Center for Professional Development and Technology [PSP-CPDT], 1992-93; PSP-CPDT 1993-94; PSP-CPDT, 1995).

The Panhandle-South Plains CPDT (PSP-CPDT) is a collaborative community involving 4 universities, 2 region education service centers (ESCs), and 66 public schools from 15 Independent School Districts (ISDs). The center serves a largely rural population in an area covering 40,000 square miles of the Texas Panhandle and South Plains.

The PSP-CPDT is housed at Region Service Center 17 in Lubbock. The PSP-CPDT is governed by a 40 member governing board representative of all partners and includes 20 public school personnel, 12 higher education representatives, 4 education service center representatives, and 4 community representatives. The Governing Board has final approval of policy, personnel, budget, and program recommendations from the steering committee. The PSP-CPDT Steering Committee has oversight, recommendation, and approval functions over policy, personnel, budget, and programs. The Steering Committee is comprised of 20 members: 10 public school personnel; 8 higher education representatives; and 2 Education Service Center representatives. Joint Quality Management Teams (JQMTs) are responsible for approving all (a) needs assessments, (b) program proposals, and (c) evaluation/assessment procedures in their respective focus areas. Upon recommendation of the Steering Committee, the role of the JQMTs has been expanded to include oversight in program planning and development, and collaborative processes.

The Panhandle South Plains Center for Professional Development and Technology contributes to the improvement of teaching and learning for all students by providing field-based teacher education and professional development programs that are characterized by collaboration and enhanced technology (Philosophy Statement, 1992).
Planning processes for creating the PSP-CPDT were initiated in November of 1992 with a series of vision-building meetings. Connie (school representative) recalls the unfolding of the initial vision as follows:

It was a huge process. We had representatives from service centers, from school districts, from the colleges that were involved. See, this service center covers the entire Panhandle. So, we have both service centers, one in Amarillo and the one here in Lubbock. We had four universities... and then primarily Lubbock ISD. Now occasionally in that process, too, some other people from some other districts would come in. Most of the planning sessions were here in Lubbock. And some of that planning - that dreaming, turning-it-into-words kind of sessions, were facilitated by a woman from TCET (Texas Center for Educational Technology) from up there at UNT (University of North Texas).

Gina (university representative) elaborated on these planning sessions, providing more detail:

(A representative from) TCET took us through the process, and we came up with the vision. We looked at shared needs, shared dreams, shared goals, those kinds of things. And we broke into groups, and then came together to come up with the one statement. And we ended up with subgroups for planning. And I was on the technology group. And then we just took it from there as far as what we perceived as needs at the public school level, the university level. And in those subgroups we have representatives from K-12, from the university, from the service centers. So, within the subgroups we had a different representative from each one of those groups, which I really think helped.

Several interviewees expressed their perception of a common vision that unraveled due to the various vision-building events. Kurt (university representative) provided the most detailed description:

As far as I recall there was three main purposes that the Center was to serve. One was preservice education. Another was for professional development. And the third piece was technology.

...The preservice part was supposed to restructure the program, put more emphasis on field experiences, get more communication between all the different entities, and set up some type of mentoring type network, I think that was the terminology that was used.
...Then on the professional development side, of course, the mentoring programs would fall under that because that involves those people; some training opportunities that maybe these people didn't have before - or add to what they already have - you know, develop some research based methodologies. ...try to put those into place for the practicing teachers. ...and then I think, the communication piece fell into that (professional development) - just getting people to dialogue more from all the different levels, instead of the ivory tower syndrome at the college and so forth.

...then on the technology side, I know the collaboration was again an issue, trying to put all the different minds and the talents and the resources together that each entity had; networking through distance learning. ...Also, I guess, to back up a little bit, I think one of the goals was to increase awareness and the proficiency of everyone in the use of technology for themselves and for their students. And then one of the things that I remember from the meeting was - that part of that was to give everybody an idea of the instructional design and application that you would use that might differ from a normal classroom setting. So take it to the level where the people could actually have a tool and use it correctly. And then I guess the main thing is to put it into the curriculum where it filters all the way down to that kid that's sitting in that classroom. That's what I remember.

More concise visions were also shared:

Well, of course, we're a large collaborative with four universities. And we originally took as our focus the technology aspect, and the field-basing component. And so our mission was to improve teacher education, professional education, through the use of clinical experiences, primarily field-based courses and the infusion of technology throughout the curriculum (Renae, university representative).

It's (the vision) to promote the development of really professional, new professional educators, and also, I think, to bring us to the forefront in technology. And that's just paraphrasing. But also, to offer staff development to, of course, the existing education community in the public schools, and then to train future teachers. And to have a collaboration among all of those elements (Dawn, university representative).

A less positive perception of the vision-building process was shared by other mentor teachers:

I think that at the beginning, we weren't, well I guess I should speak for myself, I wasn't really involved in the vision of -what do we want to do with this center. And working with our preservice mentor, both of us felt rather confused about what our roles were. What exactly do you want us to do? And we even had a meeting with all, or everybody was invited, preservice and technology mentors were invited -I don't
know how many went of this group-to dinner. And even after it was over, we were still like, "Okay, what do we do?" All of us felt a little confused about what our roles were. And I think that is something that should be, if this goes any further, that's something that should be considered, is defining exactly what you want the vision to be for everybody that's involved (Jennifer, school representative).

I think to elaborate on that (the vision), I think that I knew what my role was, I kind of had an idea of what I wanted to do. Whether it was the Center's role or not, I knew what I wanted to accomplish. And I think our preservice mentor knew what she was going to accomplish. But at no point in time was that ever explained to the administration in our building. The principal, right now, has no idea what technology mentor means. Has no idea of preservice. Two years ago our preservice mentor quit, and she's never been replaced. So there's, never was it said that this is who is going to deal with student teachers. Never was it said what the jobs were to the people in the building. And so that was a real flaw with the communication, I think (Rosemarie, school representative).

I didn't have a clue then and I don't have a clue now as to what this whole thing is about (Chris, school representative).

Communication difficulties within the PSP-CPDT were perceived as resulting from two main issues. First of all, attempting to facilitate communication between 4 universities, 2 region service centers, and 66 public schools from 15 ISDs that cover a geographical area of 40,000 square miles, was perceived as a very complex task:

...and I think just letting all partners at all times know what's going on - well, it's just very difficult, especially when we're so spread out. We've attempted to do that and tried to probably use too much of a top down communication level where we sent it to superintendents and principals, and maybe it didn't get to the mentors. We thought it would, but it didn't. So, maybe more direct communication with the people who are going to be involved - I think that's important (Gina, university representative).

The second issue that was perceived as interfering with communication during the initial phases of implementation, centered around PSP-CPDT leadership issues:

It took...our professional development center didn't really do anything, from my perception, the entire first year it was formed. We had a different director and that person didn't work well. And there was a lot of problems. And when our new director took over, it took her, I don't know, four to six months to try to clean up and get people speaking to each other again - just trying to say this is the vision of the
center and this is possible. So, we kind of got off to a bad start (Connie, school representative).

It was difficult finding a leader that everyone could respond to - one that wasn’t playing favorites or something like that. ...from my perspective, when we changed directors, things improved a great deal. But then we’d already made some decisions that were hard to undo. ...And so I think that one of the main lessons I learned is that the leader needs to truly have everybody’s best interest in mind, and not just one group or try to please a group. And not be afraid to say “no” to somebody. I think our vision has become more stable with our new director (Kurt, university representative).

A new PSP-CPDT director was hired in August of 1993. At this point, restructuring of university teacher education programs had already been initiated:

...They had done quite a bit of restructuring of their university programs that first year. They had designed a format or parameter. Bear in mind we have four different universities. They had designed a set of parameters and then each of the universities had independently assembled design teams. They had done much of their restructuring work, the school teachers and the university faculty (Carla, university representative).

Simultaneously with restructuring efforts occurring within university programs, the PSP-CPDT had planned for an interactive video network. They had turned over the design component to the universities, but “they had not followed up on it and the work had actually not begun” (Carla, university representative). Due to the emphasis of technology in the grant application, technology captured the Center’s focus for the 1993-94 year.

The original technology vision was to create an interactive network among the various partners:

Some components of it (the vision) changed because I think we found out that some of the things we wanted to do probably cost a whole lot more money. We had envisioned sort of an interactive network. And we did get a piece of that. The four universities and the two demonstration sites and the two service centers - So, we have those eight sites that are on an interactive network and hooked together with one line. But our hope had been that beyond that, we would be able to...that all
districts could connect into the professional development center (Connie, school representative).

Along with the eight sites installed with interactive video, data links were extended to all sixty-six schools. Schools were selected for data links in conjunction with where the universities currently placed student teachers. Twenty-two of the 66 schools were considered to be PDSs. The remaining 44 were additional schools where the 4 partner universities were placing student teachers. Each of the 66 schools were provided a computer and a modem for the data link. The process of installing and linking the 66 schools drew a major focus from the initiative:

...they were trying to spread this data link network and how they did it, they expanded it to 66 schools. They should have just stayed with the professional development schools. It would have been much more manageable, because in Lubbock alone - well, you can’t make an impact on the thirty-three schools in Lubbock ISD in two years. Physically you can’t. And then, what about the other 33 that stretch all over the Panhandle (Carla, university representative).

Talk about lessons learned. Like our video conferencing system. I think we made a lot of decisions, like, “Let’s put all this equipment in place,” and we worried so much on making it work and the physical component that when it did finally start working, we kind of looked around like, “Now, what are we going to do with it?” And so in some ways we let the technology drive us more than we did the outcome or the performance that we were hoping or the gain or whatever we were going to get from it (Kurt, university representative).

I think as a lot of us have been maybe swayed by the attraction of the big toys called technology. I think that steered us more than it should have. Just getting our hands on the toys provided by this grant and then figuring out what to do with them, as opposed to figuring out what to do and then go get the toys (Gina, university representative).

Once the major challenges of installing the equipment subsided, training efforts emerged and technology became a motivating factor for professional development opportunities:
I think the technology aspect kind of got everything started. We felt that one of the reasons we got the grant was because of the technology component in it. We felt we needed to make fine use of it - or lose it. So, we felt we needed to make that a key issue. You know, people are fascinated by it - it's a new avenue and sparks a lot of interest (Nancy, school representative).

As the PSP-CPDT began to crystallize plans for using the technology, the ever changing nature of new technologies made implementation an ongoing challenge:

However, the technology, of course, always gets ahead of our plans. There's always newer and greater things and you just have to invest in the future, but also understand that what you have right now will do wonderful things. We have to stress to our learners that the wonderful things that it (the technology) did in 1993 - it will do those same wonderful things now, 1995. You can do more - we tried to buy them upgradable machines so they wouldn't feel stuck (Nancy, school representative).

A cadre of technology mentors was organized to deliver technology training to the various school sites. Due to the size of the collaborative, cadre development was perceived a means for reaching such a large body of participants:

At each one of those school we have a computer, a modem, and a phone line. So, that is our communication part. That is how we have kind of - I guess - gone out and grabbed those people and said, "You are a part of what we do." And at that site we have a technology mentor. And it's that person's job to be an advocate for technology on their campus and kind of keep in touch with us and what we do. We have pulled those mentors together for several different training activities, and those are usually held at the service center. But, we've also taught courses at the university campus for credit. And those courses have been offered tuition free to our mentors. Now, we are depending on them, since we are so huge -like we can't be every place all the time- to go back and do training with the teachers on their campus, and that in fact is the model that we've kind of set up (Gina, university representative).

One avenue for training technology mentors was through the development of what came to be known as teacher camp. Teacher camp was one of the first staff development events planned, originally held during the 1993 summer:

One of things I thought was really neat and clever is a teacher camp that grew out of this project. One of the members of the service centers came up with the concept and she involved all the people from all the schools. She found a campus down in
Junction, Texas, which is far, far from us - matter of fact, it's about six or seven hours from us, and it's a satellite campus of Texas Tech, which is one of our collaborative members. ...And what she did was she took all these components that we've talked about, put them into workshops, got their presenters gathered up, used the dormitories down there (in Junction) and their classroom facilitates, gathered up computers, gathered up phone lines, went down there, and she pulled off these workshops in a summer camp setting where we had workshops during the day and then there were also activities that teachers did - like canoeing, hiking, - they played cards into the night. You can imagine. So the atmosphere was just really tremendous and made everybody feel just so much better about what they were doing (Kurt, university representative).

The one-week teacher camp originally included the 66 technology mentors. Experts from the Education Service Centers and the universities provided training in a variety of areas including “integrated packages, presentation software, and multimedia” (Gina, university representative). The technology mentors were also provided “extensive TENET training and other kinds of additional technology training” that were in addition to the teacher camp. The intention of the technology training opportunities was to build internal expertise through the technology mentors:

...the mentors at the campuses are expected to mentor. I mean, if somebody wants some help with technology, that person is supposed to help that. If there's something that could be aided by technology, hopefully that person is going to kind of bring up the ideas to that school (Connie, school representative).

The amount of follow-up and mentoring actually provided by the technology mentors was perceived as not being as pervasive as envisioned:

...It's (the follow-up from the technology mentors) not happening. It's pretty much whatever happens in that school. And we've not really followed up on that probably as much as we need to. But, again the size and the numbers of this collaborative tend to make that a tedious kind of situation. ...I don't really know how pervasive the training follow-up really is. I know of real pockets of success, and those are the ones we tend to say, “Look what so and so did! It's so good!” But no, I would have to say no, we don't know how pervasive this has been (Gina, university representative).
There’s still some problems with the technology mentor issue. Part of that initially happened the very first year when the center was trying to get off its feet, only it wasn’t getting of its feet. Some letters went out to the principals to select a technology mentor, but there was no criteria put on them for that person. So, some of the principals selected computer people, and some principals just selected somebody. And I honestly have had some problems sometimes trying to figure out why they picked that person. But as we’ve worked through that the next two or three years, we’ve changed over some people, but I still think there’s not a real clear job description for that person. And I think some of those people feel like, for example, that the computer that came from the professional development center...they feel like that’s their computer, when in fact that was meant for the whole school (Connie, school representative).

...the hope was that they (technology mentors) would go back to their schools and extend that training to their faculty. But because, and this is opinion somewhat, but it’s not off the wall...because we had no real tie to them, and because they were just political decisions, they didn’t feel any real need to go back and do anything (Carla, university representative).

However, site specific examples indicate pockets of success where technology training and mentoring were implemented:

One of our technology mentors at a school in Plainview which works with one of our partner universities, brought six of her teachers to teacher camp. And they have all gone back and trained people in their building. And now that school is going to be known as the technology school in their district (Gina, university representative).

We had one school district who is somewhat visionary in their technology and they had a TV station. They already had some limited use of video conferencing systems through their high schools. So, then we added this, we put a video conference system in the school and linked with them. And there’s been a few times where we’ve had meeting between people at the school, teachers at the school, with our teacher trainees - where they could just dialogue about teaching (Kurt, university representative).

In addition to the technology mentor cadre concept for delivering technology training opportunities, the PSP-CPDT initiated a unique technology training opportunity using videotaping as a built-in follow-up component. Kurt (university representative) describes the project as follows:
We, our university LCU (Lubbock Christian University), the service center that's located here in Lubbock, and LISD (Lubbock Independent School District) teamed together and we put together a staff development workshop and delivered it over the cable television station that the school district operates. And the local cable company puts that out on one of the cable channels. And this summer we delivered staff development over cable TV into the homes of teachers and anybody else in the community that wanted to watch. This time we just focused on technology. We called it "Take a Byte Out of Technology."

...We taught three strands, one of them was telecommunications. So we had a guy that came in every day and did TENET training, more or less, on the air. And they could videotape it. They could rewind it. They could call in with questions. They could fax in questions. We gave them assignments and they got those to us by fax, or by e-mail, of course. And it was fascinating.

...So we had telecommunications as one key component. Clarisworks is one key component. And then HyperStudio, it's a third key component. Being able to rewind the tapes and review has been a real positive method of follow-up and what's really neat is that even though our target audience is teachers at home in the summer, anybody that has cable TV can get access - even parents.

Delivering staff development over cable television resulted in positive feedback from participants:

...two pieces of feedback that we got that were both so positive, one was people saying, "I was able to do staff development that I would not have been able to do otherwise because I could stay home with my four-and-a-half month old baby." Or, "I didn’t have to get baby-sitters for my children." Or, "It was just nice to sit there in my shorts and watch. I didn’t have to get out in the hot sun and drive somewhere." The second thing that we heard, I don’t know how many people who recorded the two hours and went back and said things like, "I didn’t think I’d ever learn how to download, and I had to watch that tape three times, but now I can download." It’s a permanent record that they can go back and look at over and over again (Connie, school representative).

Technology training opportunities have also occurred by participants attending local and national conferences. Locally, one event entitled a "technology expo" (Kurt, university representative) involved renting the community civic center and inviting in a number of vendors to share their wares. "Participants came from all over the region to
participate and they received staff development credit” (Kurt, university representative).

Kurt also shared that he had attended three to four statewide and national conferences on technology that he would not have been able to attend without the support of the PSP-CPDT.

University faculty presented the most challenge in regard to receiving technology training:

We've provided staff development courses for university faculty - like the one we were teaching over LISD TV - we have 30 faculty members from Lubbock Christian enrolled in that course. We provided one-to-one training in the use of TENET and e-mail. One-to-one is more successful than groups with university folks. But, there really is this attitude - particularly at the research universities. It’s just simply not their priority. They're quite busy enough reaching their three classes and doing their research. And add to that, the young faculty members, they’re quite busy enough trying to get tenure (Carla, university representative).

Part of the vision would have been that they (university faculty) would have been involved in the training and would have been able to lead and to help develop some of instruction. In practicality, that hasn’t happened (Connie, school representative).

University people have really come along - not in big groups, but at least more than before. We have some of them present at Camp, so they do participate in that aspect of it. It’s not a lot of them, but where there is nothing, a little bit of growth is a good step. And one of the things they find is that because we have purchased them software - like Power Point, Persuasion, and the like - that it makes them look good. They weren’t trained. They weren’t real positive about being trained, but that’s okay. We get some individual calls (Nancy, school representative).

Even though there was an initial emphasis on technology, the PSP-CPDT had other staff development plans that emerged early in the initiative. Due to the restructuring of the teacher education programs and the increase in field-basing university instruction, the need for mentoring skills was identified. The first staff development plan for mentoring was initiated in August of 1993. Similar to the development of a cadre of technology mentors, a cadre of preservice mentors was simultaneously formed and they attended a
four-day program on mentoring that summer. Through collaborative efforts, this initial mentoring program grew into a preservice mentoring model for the entire collaborative:

I think maybe the unique piece has been the cooperation among the universities in providing staff development. Traditionally, any planning that has been done has pretty much been one person doing the planning. And in the past year or so we’ve seen that change to universities working together to provide the training to public schools. We have a preservice mentoring model that has been developed and delivered by a faculty member at Lubbock Christian and West Texas A&M with assistance from a classroom teacher in Lubbock. So that, to me, is the unique thing that we’ve done out here - we’ve broken down some barriers between universities who traditionally have done things on their own (Carla, university representative).

Now, there were some themes that were followed. For example, mentoring has been a real strong theme that emerged real quickly. That has been a focus. In fact, we have a training cadre. We’ve ended up with a team of trainers that we hope will be used by other people in the state (Renae, university representative).

As with the technology mentors, the preservice mentors were trained by experts, some from within the collaborative and some who were from other parts of the state. Dawn (school representative) shared highlights of mentor training as follows:

I am an experienced teacher and one who is really interested in preservice education teachers. I was just overjoyed to be able to take mentoring classes, like four days at a time. We had two offered in consecutive years, and they were just invaluable. It broadened the horizon for me and you could see the big picture. Now we can see not only the need for it, but we can also see the research behind it and the strategies and methods with which to do it.

Consonant with the limited pervasive nature of implementing the technology mentoring component, implementation of perservice mentoring also was limited to pockets of success:

Well, the first year, I think all of us 66 mentors went for training. The next summer we had dwindled considerably for training. So, I can only assume that it was not implemented after that first year. And now there has been some talk that perhaps it isn’t being implemented as it should in many of those 66 schools. And part of that, each school is unique and perhaps the administration of that school doesn’t want to turn loose of control of dealing with student teachers and observers and that sort of
thing. Or perhaps it's a mentor who isn't that committed to the process for whatever reason. Now there's some who are really into it heavily. Hutchinson is certainly one of those. That's my school. It's a junior high, an inner city junior high (Dawn, school representative).

The degree of implementation of preservice mentoring was perceived as being dependent on site specific issues at each PDS campus:

Well, like I said, I think at some campuses, I think it's (preservice mentoring implementation) doing very well, and others, well, it depends on campus leadership to tell you the truth. For example, one of the ladies who was the practitioner of the year last year at the spring conference is one of our preservice mentors, and she's also part of the training team. And in her school anything that has to do with preservice mentors, she does it. She places them in classrooms. She arranges for the classrooms. She visits with each one of them. She looks at the schedules. The principal has nothing to do with preservice. But in other schools, they may appoint someone; they go to training, but the principal still does it all. So like so many things, it comes back down to that building (Renae, university representative).

Professional development opportunities emerged within the PSP-CPDT that were not formally planned. For example, some teachers became motivated to participate in professional development activity simply by observing another teacher implementing some new strategy:

One man has brought technology projects into his entire grade level. ...teachers are noticing and saying, "Look what he's doing. I want to do that. That looks like fun" (Nancy, school representative).

I think on the technology mentor side - I think one effect has been the involvement of more people. Unfortunately, sometimes if it's only the computer teacher who talks computers - well, everybody expects the computer teacher to talk about computers. But it's a whole different story when, let's say, the science teacher becomes a technology mentor. Now it's the science teacher talking computers. That's a whole different ball game. ...Because you know, I guess we all feel when we are around someone who is perceived as being an expert in something, that if that person says, "Oh, this is easy. Let me show you how." That really in your mind, you're thinking, "Oh sure, it's easy for you. You've been using computers for 10 years." ...See, there's this mental thing. Yet, when somebody else comes back that they didn't think of as a computer user, then it's like, "Well hey, if she can do it, I guess I can, too" (Connie, school representative).
A similar scenario was shared in regard to university faculty:

Well, I think there's a lot more awareness of technology and what is available, and also, I think a little bit of peer pressure to get in there and start doing something has occurred. Because the university faculty that are involved through our field-basing in public school campuses are seeing fourth grade teachers using video discs and are saying, "Maybe we need to be doing some of that, too." Now, I'm just using the video disc as one example, but anyway, I think that's been real positive (Gina, university representative).

Another piece of unplanned staff development unfolded as a result of field-basing preservice teachers. Mentor teachers experienced personal professional growth from their working relationship with the preservice teachers:

That's one of the greatest things, I think - as we reflect on our own teaching in order to explain it better to an observer, or to make certain the observer understands what we're trying to do. I think in the end we become better teachers. I really do (Dawn, school representative).

The collaborative nature of professional development in the PSP-CPDT has changed the way universities and public schools view each other. As these two entities plan together, the "universities are finally more responsive to the real needs of the public schools rather than just telling them what they need" (Carla, university representative).

This has had impact on the professional development of classroom teachers:

I think in cases or situations where the professional development school concept is working well and where there is real interaction between the universities and the public schools, there is real empowerment. I think teachers are seeing themselves as more empowered and more professional, because in their classroom or on their campus, they have university faculty asking, "What do you want? What do you need? Let's work together to do it." They are having the opportunity for graduate degrees. They are having the opportunity for professional growth, not just classes, but they're writing articles with university faculty members. They're being given opportunities to be more professional (Carla, university representative).
For example, Renae (university representative) shared an experience from the previous year that portrays teacher empowerment:

I taught one of my, I field-based a course last year, and it was nice just to walk down the hallway and say, “Tammy, would you come down and talk to my (university) students about this situation we saw? How would you handle it? Talk to them about classroom management. Or how you love these kids that seem to be sometimes unlovable?” And I think that lifted her up professionally to know that she had something valuable to say to college classes.

Dawn (school representative) experienced working with preservice teachers as an “investment”:

...but you also feel a real part of the profession. And one of the things about being a mentor - we could never gripe about student teachers not being prepared again if we are not willing to help prepare them. ...It’s an investment.

University faculty also experience a sense of empowerment, or as Kurt (university representative) suggested, “a lot more credibility”:

And I noticed that the public school people seemed to generate a lot more respect for the colleges and their preparation...because they know that we've been in the schools and we go in the schools and that we know what they're facing (Kurt, university representative).

The university interns are perceived as the recipients of the professional development growth opportunities of teachers and university faculty. Kurt described the university intern as a “lot better product”:

For example, our teacher trainees, they - we’ve been able to give them a lot of field experience, a lot of theoretical knowledge, and help prepare them pretty well. This has allowed us - for them to be a lot better product because of all the things they have now, especially the technology tools in their hands that they can use.

K-12 students have also became involved in professional development activity. Renae (university representative) describes:
In other words, if this is a two-way street, we want people on our campus as much as
we want to be out in the public schools. And so, we've had some unique experiences
with public school children in which we have brought them on our campus. ...for
example, we train fifth and sixth graders to tutor first and second graders. And we
bring them on campus for a day of training by college professors in things like
classroom management, planing, how do you listen to a child read, how do you
correct mistakes, how do you tell stories. And it's an on-campus experience.

Renae further explained that many of the fifth and sixth grade students are from public
schools with high minority populations and college is not always perceived as a viable
option. The on-campus experience was perceived as an initial attempt in recruiting these
children to seek college options and change this perception.

The bonds that have been built by breaking down barriers between four universities
and between each of these universities and the public schools has provided an avenue of
professional development opportunities for many people. As they have increased their
level of dialogue and involvement with each other, they have learned from each other. I
have tried to capture the most powerful remarks that illuminate these professional growth
experiences:

Well, I think the perception by the public school people is that we really mean
business, and that we're not in it just for the short-term trip - that we're really
committed to what's happening in the public schools. I don't think they believed that
at first. I think we have learned to communicate with each other (Renae, university
representative).

I think the neatest thing is to go to meetings or go places and have the K-12 people
walk up to me or come up to my department head in my department and talk to the
university folks as a colleague. It's more of - "We're in this together" - for the people
who've really been involved at all stages. We know each other. We work well
together. ...And even just the people in the departments of ed. at the four universities
are now really good friends and work well together. And so I think that's been
important for my professional growth because I feel like all those people are resource
people now (Gina, university representative).
Well, if we're looking at the vision, if the original vision was to build camaraderie between the individuals, I have five or six people now that I can call when I run into trouble that I didn't have before. So, as far as my personal networking, it's been invaluable for that (Rosemarie, school representative).

And finally, the true collaborative nature of the PSP-CPDT is the thread that will hold the initiative together:

One thing that I think is unique about our Center is that it's really a collaborative. And I think if there's anything that's come out of this whole process, it's that one thing. We are working together (Renae, university representative).

_Northeast Texas Center for Professional Development and Technology_

I have gathered a variety of documents from the Northeast Texas Center for Professional Development and Technology (NET-CPDT). The following description provides a detailed introduction describing: (a) the center's collaborative community, (b) the center's shared mission, and (c) the center's governance structures. The description was taken primarily from a brochure and handout that I collected during the site visit that provided a concise program summary. However, I used quarterly and annual reports for additional detail (Northeast Texas Center for Professional Development and Technology [NET-CPDT], 1992-93; NET-CPDT, 1993-94; NET-CPDT, 1995).

The Northeast Texas Center for Professional Development and Technology (NET-CPDT) is a partnership of East Texas State University (ETSU), East Texas State University at Texarkana (ETSU-T), 45 public schools for 5 independent school districts, 2 educational service centers, and businesses committed to the improvement of teaching and learning for PreK - 16. In a re-designed initial teacher preparation program, prospective teachers spend up to a year working and studying in public school classrooms while earning their degrees and teaching certificates. In this real world environment, ETSU students and faculty work side-by-side with classroom teachers. Their shared primary belief is that learning will advance as prospective and experienced educators focus on teaching effectiveness.

The mission of the NET-CPDT is: to provide, through a collaborative commitment, relevant field-based teacher education and staff development programs in a way that
integrates research supported innovative teaching and assessment practices with technology so that all educators share a common vision of improving the learning and achievement of all students.

The governance of the NET-CPDT includes five committee structures: Instructional Leadership Teams (ILTs), Campus Committees, ISD Steering Committees, the ETSU and ETSU-T Advisory Boards, and the NET-CPDT Council. These five committee structures have been organized to allow maximum decision making in the instructional leadership teams (ILTs) with each of the other formal organizational components seeking to provide support to the ILTs. The structure has been established to ensure that maximum autonomy and authority are retained at each campus and throughout each school district and further to recognize and emphasize the importance of the learning that happens at the point of impact, namely in the classroom. Therefore, the primary decision-making unit is the PDS site-based ILTs, which consist of two to four volunteer mentor teachers, one or two university interns and/or residents, and one university faculty member.

The Northeast Texas Center for Professional Development and Technology (NET-CPDT) was conceptually initiated by a handful of people including the dean from ETSU College of Education, the superintendent of Mesquite Independent School District (ISD), and a university faculty member who later became the NET-CPDT director. The vision was crystallized as follows:

Well, I think the big, the biggest picture was the realization on the part of a few of us in the initial stages, that in order for us to grow professionally, we were going to have to do it together. That, no matter what partner you looked at - at the teacher, the administrator, the faculty member, the university student - that the professional growth was going on kind of in isolation. So each partner had its own version of it, its own vision - if there was a vision - in terms of professional development. And we saw, we felt at least, that if we’re not careful, professional development would be going different directions - that we would become counter-productive - which is really what we saw happening at the university, the public schools - all looking at the same child, but probably different perspectives, and becoming competitive. So that, you know, the university people were sort of throwing stones and saying that “You’re not doing it right, you’re not doing it according to research, you’re not growing professionally as teacher.” The teachers were saying, “What they’re telling you here at the university isn’t what’s real,” and all that kind of stuff (Frank, university representative).
This original “big picture” planted the seed for collaboration and all partners were pulled together to begin the vision building process:

My understanding is that all stakeholders were brought to the table initially. Texas Instruments, Mesquite ISD members, Greenville ISD members, Commerce ISD members, faculty members across the university in both Commerce and Texarkana, Region 8 and 10 members - they all sat in on that first group and they really did a Dupont process...uh... I can’t remember... They went through that whole process. System’s framework. They all did system’s framework and brainstormed all the possibilities for the ideal. Then, of course, identified what the barriers were to those and what it would take to remove those barriers and prioritize what, of all the things that were brainstormed, what were the realistic things they wanted to focus on. They never... this group - it wasn’t a matter of trying to reform or redefine or redirect what was already in place. It was always start from a base and say, “We don’t care what we have now. We want to build what we think - given no restraints - would be the ideal way to deal with teacher development.” All the way across the program, we always started with that framework (Carol, university representative).

The professional development ideal that emerged from vision building processes was multi-faceted and inclusionary, addressing all levels of participants: preservice teachers, inservice teachers, administrators, and university faculty. Frank (university representative) addresses these ideals as follows:

First of all, I think we would see the preservice teacher having several things. One would be that they would have a better picture of “what is” because we would have them working in the schools - which would mean that they would have a better start up because they would have had a year in school and they would be better equipped to get the jobs, to be successful on the first day.

...Number two, we would be in a better position of helping them see differences between practice and theory - and what I mean is current practice and theory - because we have both of those possibilities with us. We’d have the real world of the schools, which we have criticized, and we would have the thinking of the, hopefully the most innovative people, about what could be.

...Number three, we believed that the responsibility for professional growth is really the individual’s responsibility. That, - so therefore, we have to get all of our participants getting into a reflective mode of what they know, what they would like to be able to know or do, and how could they get there. So - and we felt like the professional development aspect was the most important ultimately, ultimately the
most important piece for faculty in terms of residence, mentor teachers, and leadership. And so we began to think, “Okay, we’ve got to develop a thinking, a question-raising, reflective kind of professional educator.” We’ve got to do that by sitting around talking, figuring out ways of, you know, telling ourselves as opposed to being told.

The ideal mentor teacher was also prescribed during these brainstorming sessions:

So, we asked, “What is the ideal teacher?” - We call them mentor teachers. And, so we kind of hashed that around. And, now we did all of that collaboratively, too, with public school people. Well, the interesting thing is what they did not come up with was the traditional university expectations for a teacher. They didn’t talk about experience. They didn’t talk about degrees. They didn’t talk about the achievement of the children. But what they talked about was their interest in growing themselves - professionally. Becoming more of a reflective practitioner and a thinker, open to questions, open to visitors, interested in working with other adults, sharing what they felt about what they do and giving other people opportunities to kind of come and, and become a partner with them, kind of breaking the notion that, “I’m all by myself in this room and I can close my door.” You know, it was much more to do with interpersonal skills, interest in the challenge to “be”, I guess to grow professionally themselves, and to assist somebody else as well (Frank, university representative).

With an ideal in mind, the next step was to gain voluntary support from public school and university individuals. Creating participant “buy-in” was considered critical to successful implementation of the NET-CPDT. Public school “buy-in” unfolded as follows:

Our vision was that we would go to schools and with, you know, a (university) faculty member, the superintendent, or some leader in the school, we would go into a campus where we were invited to talk about this vision. That this vision would kind of be presented, because I think one of the things that I have always believed - you have to have a visionary. You have to have at least one. And then you have to have some other people who are going to buy into it. They may not know exactly what your vision is, but they kind of believe in what they’re hearing...

...So our purpose was then, if we could take two or three visionaries, go into a school and say, “What would you think if we could do this? If we could become a school where we’re all working together in the same facility?” And we would kind of, you know, raise that question and then interact. And then we would sort of leave and say, “If this is something that you really want to do, you guys get together as a faculty in
the ISD, and you decide if this something you want to participate in” (Frank, university representative).

The vision demanded a high level of commitment by the majority of participants on a campus in order for that site to be identified as a Professional Development School (PDS).

Similar voluntary commitment was also envisioned for university faculty:

Uh, - I think the way, the way it was presented to them (university faculty) was very much done in the same way it was for the public school people. “Are you really interested in participating in this, in this vision of future training?” We started off with just one volunteer. We actually had one volunteer who was an instructor, not even an assistant professor, who had just finished her degree at the university and we had hired her on as a non-tenure instructor...

...So, that’s how it got started. But what we were - in our vision, our original vision - we wanted faculty who were interested in doing this on a volunteer basis and we didn’t want people who felt, uh... sort of cajoled into this. We wanted them to want to do this because it was going to change the faculty role tremendously. Well, we only got a few takers, I mean - the first semester we had one, then it went to two. And a few more people began to get interested. And what I have found is that as long as you have volunteers, they really can carry out that vision. When you start assigning, which we have now had to do, then... it changes - changes the whole picture (Frank, university representative).

The vision building process led to the predication that the collaboration between entities would be the initial focus of NET-CPDT:

What we said was that we were on a train and the train is called field-based teacher education, and it - we’re heading in a direction and we’re going to be different basically each day of the week. But, we’re heading in a direction. We’re not exactly sure where we’re going to go, but what we do know and what we do believe is that professional development will be different as we go. What we predicted was that the first thing that would happen in professional development is that we would be very preoccupied with living together (Frank, university representative).

Consequently, the visionaries of the NET-CPDT decided that they would not make any expectation in terms of curricular or instructional innovation until they learned how to
work together in a common learning community. They projected a five year plan for implementation:

...So, we decided that our first year should be primarily team building, mentoring, training, teaching interns how to be professional in school, ...and (university) faculty would back off in terms of - well, they would basically honor schools instead of being critical of them. That we would have to start by stopping the stone throwing and learn how to live together in the community out there. That was our number one - that was the vision for year number one...

...Then we decided that we would - over a five year period - our vision would begin to move into things like teacher self-improvement. So we would move into teachers setting goals for their own classroom, and that the staff development would be driven by those needs. ...Ultimately, we would begin to get into what I consider to be programmatic explorations. You know, like, "Are we doing better jobs of teaching reading - math - or science?" or, "Okay, now we're doing a better job of using technology."

...Now, maybe in year three we would begin to look at real innovation like integrated curriculum. Like whole language, for an example. Like integrating math and science. Which, by the way, we were not seeing very much of - if any. And then in year four, we would begin to really work together to implement those things. And year five, we would really get into program evaluation and that sort of thing (Frank, university representative).

As the participants of the NET-CPDT entered into the initial phase of learning to "live together", traditional barriers that had existed for years between the partners were perceived to diminish:

...Their (university's) relationship with the school districts is now - well, there's a trusting. That trust had to be built between the university and the districts. That was a big part of this whole thing. We (university) weren't going in there to change mentor teachers and to say, "You're doing it wrong" (Deborah, university representative).

Traditional barriers within the public schools were discussed:

...so we're all rowing to keep the boat afloat and before, some people were choosing to build their own boats and some people would choose not to get on it. ...I think it's typical in all education. Because in classrooms, you have your own classroom - traditionally, which is something in education - we've been allowed to isolate. And
then you hide your secrets because of appraisal systems, you don't want to share too much (Kathleen, school representative).

...and now, well it's taken the individual mentor teacher a long time to trust to have an intern or resident in the program, again because they finally trust that someone from the university is not going to come in and tell them they're doing things wrong - that they have to change their whole dynamics (Deborah, university representative).

Traditional issues within the university system were perceived as a challenge:

In the beginning, there were only a few faculty members working with our program. There was still the demarcation between the traditional student teaching program - between the faculty members who taught courses on campus and faculty members who taught field-based courses and worked in the field. So, there was a definite demarcation and separation. And also, the secondary program was not in with the CPDT. So there was a real struggle throughout the first (CPDT) administrator's period (Deborah, university representative).

Their (secondary) vision was totally different. And I think that they knew what the elementary vision was, and their attitude was, “Well, that’s fine for elementary.” ...Ya, we’re talking locker room conversation, dinner conversations. Whenever it was brought up you could feel there was tension mounting. Were two visions going to be allowed to continue, or were they going to be forced to merge into one? This was long before implementation ever happened (Kathleen, school representative).

I do see the collaboration between the departments now because there’s more confidence that number one, they have a better idea of where they’re going and what they want the end product to be (Deborah, university representative).

Team building activities and increased dialogue between partners led to the implementation of an inclusionary model of professional development, involving inservice teachers, university faculty, and university interns:

For example, one of the things going into this program, was that all the public schools committed from the very beginning to include those pre-service people as employees - so to speak. They were invited to all the inservice days before school started. They were invited to attend every single professional development activity sponsored by the systems the entire first year they were there (Carol, university representative).

Preservice teachers’ attendance at inservice sessions provided a “backup system” for the mentor teacher (Carol, university representative):
When you look at the philosophy long term, it was, in fact, kids - K-12 learners we were targeting. When public schools began to invite preservice (students) to attend the professional development with inservice (teachers), that meant the mentor teachers took their interns and residents along with them. And then they went back to their classrooms and together they were able to do whatever it was that they were directing towards their K-12 kids because both entities had been involved in that process. It was a big implement. A backup system.

The mentor teacher was especially targeted for professional development opportunities.

"We surveyed, analyzed, documented problems, and designed staff development to totally be based on mentor teacher needs" (Kathleen, school representative). Frank (university representative) describes the value of providing professional development for the mentor teacher in detail:

...what we're (university) going to do is turn the, turn the training - turn staff development upside down. We're going to spend most of our time with teachers, not with interns.

...One has to go with the notion that we are interested in a paradigm that suggests that the intern is primarily mentored by the teacher, not the faculty member. That the mentor teacher is mentored primarily by the faculty member, and the real relationship is between the faculty member and the experienced teacher. Because when you spend five minutes with a student, you have to repeat that five minutes with every single student you have from now on to the end of the world because it's the same issue. When you spend five minutes with a mentor teacher, that teacher has grown professionally, as a result of that five minutes. ...So every time we help a mentor teacher learn how to deal with an issue, that mentor teacher has that forever. ...by focusing on the mentor teacher, our interns and residents automatically benefit.

...the research had said that the power of the mentor teacher is so much stronger than the power of the university that no matter what you do as a faculty member to a student, once they go to the culture of the public schools, whatever is happening there is much more powerful.

Mentoring strategies were perceived as a major professional development component by all interviewees. Frank (university representative) shared, "I think that the greatest professional development of all is the interaction - everyday interaction of a mentor
Reflection was considered to be a professional development component intertwined with interaction processes, especially in regard to the mentor teacher:

...and for a teacher to begin talking about herself as opposed to talking about the intern - that's progress. I have seen more professional growth when, at the point where the teachers begin to talk about themselves more than about their intern. That's probably worth more organized staff development than anything I can think of (Frank, university representative).

The various interactions were a definite pattern of professional development emphasized throughout the interview sessions. The following responses are merely a sample:

One mentor teacher said to me, "Now, my intern was off with my other team member for four weeks and when she came back and said, 'Man, these kids have really made incredible progress. Are you aware of how much they've learned since I've been gone?'" Well, of course the teacher is not aware because the teacher is there every day. So, they have gotten some affirmation. Evaluators don't come in and give affirmation like that. The interns and residents do because they see it over time. They see things other people don't see and they share those things because they have learned to be reflective (Carol, university representative).

Larry (university representative) shared his perspective of professional development occurring via interactions:

When we first started the center, one key that helped me put it all back in perspective again was - we initially, that first semester, set up our (university course) seminars so that we would demonstrate strategies in seminars. They (university interns) would have to take a strategy out that we had demonstrated in seminar, and within the next week to two weeks, they had to do it in the field and then come back and report on what they were doing. ...and a wonderful mentor teacher asked me one day, because I said, "Marsha, we're so stressed and we don't know how to get all the content into the seminar because we're only doing the seminars once a week and it's all day, but we don't know how we're going to get this in." And she look at me and she said, "Don't you trust us? ...I was an undergraduate at the university. I finished my master's degree there. I know the strategies. Don't you think I can model the strategies? Couldn't they see it from me first?" And I was like - aha - paradigm shift...
...So, as far as getting into the schools, I love getting into the schools. It's getting to be a thing where I will be invited to do demonstration lessons within teachers' classrooms and that kind of thing now. So, we started inviting teachers to come in and present in our seminar. And teachers are now starting to say, "Hey, we can invite them (university faculty) to come out and do some of that stuff, too." ...It's going both ways at this point in time.

...We have consistently tried to do more (university) faculty development up front. It never works because you don't really know what you need to know. You don't even know what questions to ask until you're in it. ...Every semester we to back and we pull all of the questions and all of the complaints and all of the kudos together and we say, "Now what can we do better this semester? And we try to do it better, but it's like everybody's at the wrong place. And you've got brand new mentors jumping on board with very professionally developed mentors already in place. And it's almost as if the new people jumping on board have to go through this developmental process. And that - part of these new people jumping on board - well, there's a lot of synergy there that keeps us (university faculty) going and thinking. It's like there's always new people coming on and we're (university faculty) always having to reflect and talk about what we're doing...

...But, it's the same thing for the mentor teachers in the field because part of the reason that they are developing themselves is because they have to talk about what it is they're doing and why they're doing it. For example, I was working with a mentor this morning. We had an intern that was not doing well. He wasn't an open communicator, wasn't questioning, wasn't taking initiative, so we put him on a growth plan two weeks ago and he had begun opening up those communications... And he (intern) identified two areas needing further growth for the coming week and so I turned to the mentor and asked him if there was anything he saw as needing improvement.

"Oh, yeah, his classroom management."

And I said, "Well, what specifically do you want?"

"Well, you know, I want him to have the attention of the class."

I said in return, "You don't seem to have any difficulty with that. You make it look very easy. How do you do that?"

And he said, "Well, you know, you just do it."

"No," I said, "you have it down. You are an outstanding teacher. You have outstanding control. You have your strategies together. Your students learn.
They're extremely successful. But it's automatic for you.” And that's why I kept stressing to the intern that he needed to ask questions.

Now the mentor teacher slipped into this - and you could just see the wheels turning, holding this up to the conscious level. And I kind of brushed over it and I said, “Don't worry about it and we'll come back to it.”

And we shifted the conversation and the mentor popped back and said, “Wait a minute. I know. I know.” And then he began talking about how he started by teaching the students to use twelve-inch voices and that's how far away somebody needs to be to do cooperative learning. ...He talked about getting their attention and why you don’t have to holler and ... it’s because the structure that he set up at the beginning of the semester...

...just bringing that all back to the mentor teacher's level of consciousness keeps us fresh. And it's a very synergistic kind of example for all people. But without the supportive reflection, to me the key here is supportive reflection. The university liaison or person going in and just picking and pulling at little things. I very seldom have to answer a question when I'm out in the field. All I have to do is ask them. So basically what happens is they ask me a question, and I say, “Well, what do you think? What do you do?”

Kathleen (school representative) also shared numerous occasions of interactions that supported professional growth opportunities:

...this program is not only going to put a higher quality of educator in the classroom, but it will directly impact those who are already in the profession. It will either motivate them to grow, stand up for their profession, become aggressive and assertive, or it will encourage them to get out. And there has been no other way that we could have done that. It doesn’t matter, you can have 20 evaluations from evaluators, but still evaluators cannot kick out a bad teacher unless they do some criminal offense. We can lecture to people all day long about being better teachers. We can have motivational speakers all day long. But the only thing that will change a professional group is when their own peers demand more of them...

We believe the system will police itself. They'll get tired or their peers will apply pressure and they'll drop out or they'll go to training. Of course that puts the pressure on staff development to be practical and usable.

...and then the side part being is that mentors are now getting to see what universities are teaching, seeing that it's not all ivory tower because these interns and residents then come into the classroom and put it into practice. ...when they watch the intern and resident interact with students, and they see students learning some new things
from the interns and residents that they wouldn’t learn from them, well - it’s forcing
them to reflect on their own teaching. Whereas if I’d been the evaluator and said the
same thing that the intern and resident said, it would have been me against them. See
what I mean?

That’s called metacognition, and the whole point, in my opinion, of improving the
profession is based on this. Okay, just think about this - “I can read back my lesson
plan in my mind while I’m standing on my feet in front of my students. I can redesign
the entire lesson, move on, and never miss a beat.” That is a master level teacher.
How do you get there? You have metacognition. Once you’ve experienced it, the
confidence builds and all the other stuff you need, not the other way around. How do
you get metacognition? Through self-reflection. Through being so demanding that
you analyze.

Mentor teachers also shared there perspective on professional growth opportunities
provided through various interactions:

Change has been tremendous. I’m not anything like I was. I just think like every
semester I change. It’s really opened my eyes. ...It’s just being more aware of other
ways to do things. I’ve been in third grade now for six years and my intern just brings
in new ideas all the time. It seems like I have a broader outlook on, “Okay, this is not
the only way to do it” (Tracy, school representative).

They (interns) make you think. For example, one day an intern asked Ms. Sharp,
“What do you do when they (students) keep reading so slowly.” And she asked
several question - this was in her reflection journal. It really made us think. I
personally didn’t know the answer, so guess what? I went and found the answers
(Alyson, school representative).

They (interns and residents) have given me a sense of freedom. I was always - I
didn’t want anybody to come into my room. I didn’t ever want to leave. I was very
possessive, territorial. - I don’t know what is was. But since I’ve had someone else
in the classroom, and I’ve had to give over some control, I’ve found it’s a wonderful
freedom, and I love to sit back and watch my kids - listen to the funny things they say.
When you’re in class, you can’t take time for one second to just watch your kids.
And when someone else is doing the teaching, I have so much fun just watching those
kids. ...Oh, and there’s something else I almost forgot... I’ve watched the doors.
I’ve been here three years. And I’ve watched the doors open. Room to room the
doors are opening. They’ve been closed the whole time I’ve been here, until now
(Kelly, school representative).
Yeah, it would be hard for me to go back and do everything all by myself. Because I expect so much to be going on in the classroom now. And if I had to go back and just be one person - no way (Sylvia, school representative).

Interactive professional development opportunities simultaneously extended into technology components of the NET-CPDT. However, prior to any professional development growth occurred in “using” technology, a particular sequence of events, worthy of mention, unfolded. These events pertained primarily to technology equipment issues and the delay of practical applications:

Technology was not on line the very first semester that we began. We brought it on line the second semester with a person who was hired through grant funds. But we found it very problematic because when you have someone who is a technologist, they aren’t necessarily teachers. And when you have someone who is a teacher initially, they weren’t really technologists. Anyway, the technologist would - how do I say it - would almost treat the mentor teachers and the preservice teachers as children and almost like, “Don’t touch the mouse. Keep your hands on the keyboard...” - you know...

...Now, for technology sake - very truthfully, at the beginning, that was a good person to have on line. Because the person that filled that position ordered hardware, ordered software, was able to consult with the district to give them the information they needed. The difficulty came with that person who was a technologist when everything was here and then they were supposed to teach people how to use it. That was when things got real problematic (Larry, university representative).

These training issues caused a delay in participants learning how to “use” the technology equipment. University faculty, in collaboration with school partners, were already designing university coursework to be delivered on site. Consequently, technology components were not integrated into the restructured syllabi:

We had integrated all of those courses into one syllabi per semester and we found initially that we did not integrate the technology. The technologist could not see how that was integrated, how that would fit. And so, the technology was still kind of outside. ...So, it was like we were doing integrated seminars for math and science and literacy and classroom management and all that stuff, but then the technologist
would take them (university interns) separately and do something different with technology only (Larry, university representative).

So, the first progression of events related to technology infusion was in the hands of the technologist. When the technologist’s position was terminated the following semester, they “hired graduate students who were educational technology people to come in and help” (Larry, university representative). One doctoral student in particular helped them integrate technology components into their syllabi. When she graduated and accepted a job elsewhere, they relied on a “math professor who was more of a technology person than an education person” (Larry, university representative). He would take the university students into the lab and teach them technology skills. But, what finally prevailed as successfully integrating the use of technology into instruction, was the interaction between the university students and the mentor teachers:

But the bigger picture is what actually worked because as interns and residents went out into the field and began helping the teachers, the teachers picked it up and the interns and residents were actually teaching the mentor teachers. Now the mentor teachers have turned around and have begun mentoring the new interns and residents in how to do all this. But the interesting part that happened was that initially we were taking the second semester preservice teachers and had them doing the technology piece. Well, once the mentor teachers saw the value of the technology - as far as grading, as far as preparing newsletters, as far as doing overheads and transparencies, whatever - as soon as they began to see the value of how that could be integrated, they started saying, “Hey, you (university) guys need to do more with technology the first semester they’re in the program, not the second semester.” ...So, we pulled some technology components into the first semester of the internship (Larry, university representative).

Technology was a motivating factor with participants in the NET-CPDT. Every mentor teacher received a computer and a printer. A “classroom of the future” (Carol, university representative) was established in every partner school district. The classroom of the future meant that “somebody in the schools somewhere was not going to get a
computer and a printer for themselves, but they were going to get four or five networked
computers that their students could work on along with an instructional cart that had a CD
ROM and LCD panel” (Carol, university representative). A site specific success story of
implementing a group of networked computers follows:

We have a lady, a mentor teacher, who has been teaching - I don't know - at least 25
years who said, “I want a classroom of the future.” I mean this lady has never used a
computer. She really wanted to do this and really wanted a class of the future and she
has... you should just see the stuff she does with the kids in her room. You know,
she's a fourth grade teacher in a building who does major, major, major technology.
In fact, her whole room - I think she has one, two, three, four, or more networked
computers. ...they put the monitor on a lazy susans. Instead of having desks, the kids
have their desks at this round table. They have keyboard access and they can turn the
monitor to wherever they sit. Then the teacher is networked and she can project
instruction and the kids can enter into that process from their round table because
they have access from where they are at. It's been great, but the drawback of that is
there is only so much money and there is only so many “classrooms of the future”
established (Carol, university representative).

The technology equipment was perceived as an initial “carrot” directly related to level
of participant involvement:

Technology was really the carrot -especially in initially getting mentor teachers
involved and districts involved in buying into the program. The grant was written in
such a way that it was extremely people poor, very heavy on technology - but it really
put a lot of technology in a lot of places. And that was done very purposefully so that
when the grant money ran out, there would be some technology in place (Larry,
university representative).

Professional development opportunities were delivered through a variety of methods.
Workshops for all mentor teachers were held in central locations. During my site visit,
Kathleen (school representative) was presenting to mentor teachers, university faculty, and
interns and residents from all partner schools on mentoring strategies. She shared that she
had delivered numerous seminars since the beginning of the initiative and described the
first seminar as follows:
The original commitment was a three hour seminar, but they (the mentor teachers) got the entire day off. And that’s part of mine and a couple of other people’s little babies. It was not always well accepted by the schools, I’ll tell you that up front, but our belief was that there was not enough communication time. ...In the morning they would come to mentor seminar ...then they could go to a long lunch; they could go shopping. They could do anything they wanted to do as long as they were together as a team. We wanted them to have some time to interact - to communicate.

Mentor teachers recalled specific content of the mentoring seminars to encompass “talking about better ways to evaluate, better adjectives to use, how to communicate what we’re trying to communicate to the student teachers, and if it’s bad news, how can you say it” (Sylvia, school representative). Kathleen (school representative) also held mentoring seminars for interns and residents:

Originally, my goal was just - or my assignment was to work with mentors. This is probably the first year I’ve actually spoken to interns and residents. ...there was interest of doing an open seminar like I just did on How to Con Your Mentor. We try to name it with something catchy.

Formal workshops for technology training were also held. The workshops were designed to train all participants in similar software products so that they could all be “on the same page” (Frank, university representative).

Initially, outside trainers delivered staff development for mentor teachers and residents and interns. University faculty and ESC trainers were the main trainers. The goal eventually was to shift the training to a more internal model of delivery, with “mentors taking the responsibility for delivering staff development” (Kathleen, school representative). For example, Deborah (university representative) shared that “last summer the whole training (institute) was planned by a group of mentor teachers who got together with (university faculty) and they organized and they delivered it” (Deborah,
university representative). Larry (university representative) describes the emerging use of mentors to deliver training as follows:

...see, what always happens, because we are growing so fast, is that we constantly have new mentors coming on line who have no technology in their classroom and have no training. And so, it’s constantly like a backdoor method of exposing them to what’s already in the school. And also, one of the things that’s happening in the school districts is that the school districts are selecting specific mentor teachers and getting them more current on technology so they have a trainer-of-trainer’s model kind of in place. ...of course, because we’ve really gone to a model that makes things site based, the actual implementation is going to depend on each district; it’s going to depend on each building.

NET-CPDT professional development opportunities resulted in partners changing familiar roles and responsibilities. One of the main arenas of role changes was perceived to develop from the empowerment of mentor teachers:

See, if I’m a mentor, if I’m a teacher and I’ve been selected as a mentor, no matter what the criteria, the university comes to me and doesn’t give me a list of rules. They say, “This is the basic vision of the program. Here are the people who are going to be the key players. We need your input. We’re developing this with you.” And these mentors, who are used to being told by TEA or administration or school boards or whatever, how to breathe, how to dress, - well can you imagine? I think there was a case of paranoia in the very beginning for a while, because they were afraid to do anything without checking it out (Kathleen, school representative).

I’ll tell you what I think. People (mentors) wanted the familiar structure of, “Tell us what to do and we’ll do it.” But now they’re hearing, “You have the freedom to do what you think is best for that student. You’re the one that’s working with that intern or resident. What do you think they need?” And the mentor teachers have had to learn to trust their own judgment, especially in (intern and resident) evaluations (Deborah, university representative).

And that was real hard for us. That was something that was really hard. We kept expecting the university to give us more structure and guidelines, and they kept saying, “It’s your decision.” And we weren’t accustomed to that. And finally we decided, “We’re doing right” (Sylvia, school representative).

We have more input. Before things had kind of been done for us or to us or something, and this time we had more, much more input. And I think that was exciting for us (Tracy, school representative).
I think we see ourselves more as professionals with a little more self-respect because someone is giving us some credit (Alyson, school representative).

It's provided a link with the university. It's kept me up to date with what is current, what's going on. It has made me reflect on my teaching and on the way - the kind of person that I am (Sylvia, school representative).

Somebody has demanded us to be professional, rather that create an environment that we have always felt is professional, but yet we've not verbalized and have not taken up that responsibility to be a professional personally. And I think they (university faculty) have pushed us into that. ...and yes, now I can help in this situation and I can help another person (Kelly, school representative).

Empowerment created new leaders. Mentor teachers have taken on responsibility for setting up campus meeting where interns, residents, mentors, and liaisons gather together to dialogue. Stephanie (school representative) shared, "There are some areas that I have stepped out in and taken some responsibility for that I would have never taken four years ago."

University faculty have also experienced role changes. Frank (Frank, university representative) describes the evolution of these role changes as follows:

Well, as for role changes (for university faculty) - a major one was, in fact, that a re-look at modern day classrooms was going to be a culture shock to the university professors who really had been talking education but hadn't really seen it. And so that was going to be sort of a revolution to open up the minds of faculty members to recognize that teaching in schools is a very tough, tough job. Another role change was that they were going to have to of their content and be able to answer questions like, "Is this content relevant? Is it valid? Is it appropriate to deliver in this kind of program, or should it be delivered somewhere else?" And so everybody participating had to look at their content this way.

Now, remember, the faculty members who participated in the program were volunteers. ...They were beginning to realize that what they thought was important when they were on campus turned out not to be so important - that they had their priorities, their focus on theory - theory to practice. They realized that they can go from practice to theory just as easily. ...And so, university faculty members began to almost reverse their paradigm and start off with, "What are you doing right now in the
schools; what do you need to do to survive?" And so they began to go from practice to theory. They also began to really recognize that much of what they thought was important, was really more important for experienced teachers - but not necessarily for novices.

Professional development growth was not perceived as a pervasive thread among all partners at the time of the interviews. The various examples shared depicted site specific pockets of success. When I asked if all levels of learners, including university faculty, university students, and mentor teachers, participated in professional development opportunities, Carol (university representative) shared:

I can't say everybody is involved that needs to be, but what I am saying is that everybody has been invited and everybody has had an equal opportunity to participate. Some, of course, did it more than others, based on their own styles and needs.

Professional development opportunities benefited both university interns and K-12 students. Kathleen describes the PDS graduates as follows:

After the first group graduated, and definitely by the second, the level of our graduates was so high, so sophisticated, so superior. We could place the majority of them - 95% and up - with someone who had been in the classroom five years, and they could teach as well. They have the same confidence level. Classroom discipline, the creativity was so superior that those people involved in the program seemed so superior. ...I mean - this is a direct result of the program. And, so that confidence and ability led to people saying, "My program." And I believe if the students hadn't been superior, if they'd just been equal to student teachers in the traditional program, it (the program) would have collapsed.

Larry elaborates on the benefits for the K-12 students:

The one's that actually benefit the most are the children because it's the mentor teachers in concert or in tandem with the preservice teachers that are getting things produced and done for the children - to get children involved...

The future of NET-CPDT is to successfully institutionalize the program so that all university faculty will be assigned to a PDS to collaboratively deliver university
coursework. Moving away from a voluntary model of program participation has created some areas of concern:

I do have some fears for the future. ...I see the reluctance of the (university) faculty to be willing to put out the effort that it takes, I mean no one knows any better than you and me, the effort that it takes. And as long as faculty members, the old faculty members are going to be assigned, as they are now having to do at East Texas, there’s some real danger of sabotage. And I’m already seeing it, faculty members who are determined it won’t work, don’t like it, didn’t like it, never volunteered to begin with, fought it from the beginning - who are now expected to participate. And I call them reluctant participants. I do fear that they will not be successful in the schools (Frank, university representative).

Institutionalizing also means expansion. Larry (university representative) shared that at the time of the interview, the NET-CPDT network was “getting so big that we’re splitting apart.” Just in one school district, the NET-CPDT had 86 interns and 31 residents currently field-based and the upcoming semester would expand to 86 residents and 51 interns. Due to such expansion, quality control concerns were shared. Kathleen (school representative) summarized the issue of quality control as follows:

We need to protect the quality of the program. ...If you want people to respect education, they have to see quality. And what they see right now is we’re still doing the Target, Walmart, Kmart quantity thing. ...We ought to be the front leaders in being able to say that we’re going to protect it so that means we’re going to have to have more money. If we don’t have the money then we’re going to have to say to students, “I cannot put you in this program. You’re going to have to go on a waiting list or another university.” You’ve got to draw a line.

As for the future of professional development in the NET-CPDT, experienced teachers were specifically targeted:

I think this program is going to increase the need for graduate education and staff development for experienced teachers because I think our students are really, if you want to know the bottom line, I think the students are coming out being better start-up teachers, but in terms of the knowledge or in terms of the information that we (university faculty) were able to give them with all of our classes, a lot of that they don’t have anymore. They learn by mimicking their mentor. ...I think it’s going to be
more important that we go back in and get the research supporting practices, get the literature back in - in a bigger way after they (interns and residents) are in the classroom as a regular teacher, where it's more meaningful, you know. Then maybe they can have an effect on future interns and residents - and on and on (Frank, university representative).

North Texas Center for Professional Development and Technology

I gathered quarterly reports, annual reports, grant applications, and program approval applications from the North Texas Center for Professional Development and Technology (NT-CPDT). These reports provided a detailed background for this case report. The following summary was abstracted primarily from three documents: (a) the original grant application (NT-CPDT, 1993), (b) the refunding grant application (NT-CPDT, 1994), and (c) the program approval application (NT-CPDT, 1995):

The North Texas Center for Professional Development and Technology (NT-CPDT) was one of the first eight centers to be awarded grants by the Texas Education Agency (TEA). ...The mission of the NT-CPDT collaborative is to develop a center that is a learning community for students, preservice and professional educators, and community members in a way that: (a) provides effective, results-based instruction programs for students and field-based professional development programs for teachers and other educators; (b) insures collaborative decision-making among all partners that focuses on student learning, continuous professional development, and community access and involvement; (c) infuses technology into all aspects of teaching and learning, from preschool through adult; (d) promotes continued inquiry into teaching, learning, curriculum development and education technology in order to continually enhance levels of academic excellence; and (e) respects and utilizes the unique talents of members of its ethnically and educationally diverse communities so that the achievement, competence, and commitment to learning of all members of the learning community are enhanced and continually improved.

The NT-CPDT collaboratively planned its first Professional Development Schools (PDSs), an elementary school and a middle school, in Area IV of the Dallas Public Schools (DPS) to begin fall 1992. The following year, field-based programs were initiated at several sites in Denton ISD and at the middle/high school of Aubrey ISD. University of North Texas interns participating in the NT-CPDT had the unique opportunity for experiences in diverse school settings including large urban schools, suburban schools, and small rural schools. These three school districts serve children and families from very diverse backgrounds representative of Texas public schools.
...Additional features of the program include a focus on learning, rather than teaching, emphasis on inclusion and multicultural instructional strategies, a conception of technology as an invisible tool for teaching and learning, along with an emphasis on generative or constructivist learning, and developing teachers as researchers to produce a self-improving system and to disseminate lessons learned.

The kernel of the vision that led to the creation of the NT-CPDT collaborative emerged through a process described as complex and “highly political” (Mike, university representative). Interest for developing professional development schools (PDSs) originated at the university from a couple faculty members who strongly believed that the University of North Texas (UNT) needed to be a part of the PDS movement because “we need to maintain our position as a leading teacher education institution in the state and we’ve got to respond to this kind of stuff” (Mike, university representative). “Stuff” referred to the state requests for proposals (RFPs) for creating Centers for Professional Development and Technology. So, the journey for being awarded state money began:

...Anyway, what happened, and this relates to the vision piece, is that any time that there is inducement money out there, any time that there are grants out there, one of the processes is trying to figure out what it is that the grant wants. In other words, how can you get funded becomes a question, rather than how can we do great things. So, it was originally inferred ...that the big piece of the CPDT grant was to be the technology piece (Mike, university representative).

At this point, various agendas of key players intercepted. First of all, the university wanted to partner with Dallas, an urban area, to “have a high-tech pipeline” (Mike, university representative). Dallas agreed to participate to avoid the chance of UNT “going 30 miles down the road for a different partner” (Mike, university representative):

So, what I would respond to you in terms of a vision, the first vision was a technological one, but it was a technological vision that served basically a political agenda. How can we become more affiliated with Dallas? And then Dallas’ response: How can we do a thing that will keep us from being embarrassed by having
it go to Fort Worth? And that resulted from the interpretation of the RFP as being primarily centered on technology, particularly distance learning (Mike, university representative).

The next decision involved selecting the specific PDS sites in Dallas:

...Well, first of all, we said, “Here are the circumstances. We need some inner city schools, an elementary and middle school in close proximity to serve as the pilot sites that are near a fiber optic trunk line.” And that’s how we came up with the elementary school and middle school that we used because according to the telephone company’s maps, there was a fiber optic trunk line going right down that street that the elementary school and the middle school are on. ...That later proved to be false. There was not one (Mike, university representative).

So, the decision about where to locate the initial PDS sites was based on finding a nucleus for the initiative that was on a fiber optic trunk line. At this point, internal politics within Dallas began. The two particular schools selected were considered to be “two of the lowest performing schools within this area with administration and teacher problems” (Mike, university representative) and the NT-CPDT initiative was seen as a possible avenue for “mass transfers to get the teachers out of there, get new ones in, get the principals out, get new ones in (Mike, university representative):

So, now you have this very complex political environment and that all of these decisions have been made, not on the basis of a vision about what can happen in terms of - that there’s this vague notion of vision that says that this initiative can be used to improve schools and to provide an extensive field-based component for teacher education. Okay, that’s just this vague vision. There was no real vision of collaboration whatsoever. There was no real vision of staff development at that point. ...all those kinds of things that we came to call the key attributes - collaboration, restructured teacher education, staff development, and technology, all those emerged later. They evolved (Mike, university representative).

Initial planning sessions began in spring of 1992. The political background cast a strong influence on the sessions:

They were sessions attended by a constant group of teachers, and by a rotating group of administrators, each of whom would come in and toss in their political agenda and
we would have to deal with that kind of thing - not really being able to make any kind of consensus, not really having any leadership from the school district or from anywhere else that would have allowed that to be, because it was such a tumultuous place. Dallas was a very polarized place at that time ... polarization along ethnic and cultural lines, all this kind of stuff going on. So these meetings were just - I used to characterize them as agendas flying around like a barrel full of Frisbees. Just throwing them all over the place and nobody being able to reach any kind of consensus agenda about these schools. ...and the teachers were the constant group, but of course, they were all intimidated by all this administrative mess (Mike, university representative).

In the meantime, the Request for Application (RFA) and the law for the Texas CPDTs was written by the state funding agency. Instead of the initial interpretation that “technology was to be the major issue, collaboration came to be the major factor” (Mike, university representative). Meetings were held throughout the spring semester, but “nothing was ever resolved” (Mike, university representative). What kept the schools involved was the original promise of technology. “That was the carrot” (Mike, university representative). Mike further discussed, in particular, a retreat that was held that June, in which teachers and building administrators provided input in regard to a vision for the initiative:

They had visions of collaboration - about how they wanted respect and things like that. They felt they could offer some things to the preservice teachers and they could use the preservice teachers as basically more adult bodies in the classroom to help with their kids and so on (Mike, university representative).

The following meeting was also perceived as significant:

And then I held another meeting in which, because of the need for a collaborative, I called up all the universities in the area. ...We had about six or seven universities there. And I formed, literally, I formed what became to be called the Metroplex Coalition of Collaboratives... (Mike, university representative).

The primary responsibility for crystallizing the concepts for the NT-CPDT was dependent on two university representatives. Mike described the process as follows:
What happened is that the two university representatives sat down and took the input from the last two meetings - the one that I told you about with the teachers and administrators and then the other one when we formed the Metroplex Coalition of Collaboratives. We sat down and took the input and wrote the collaborative's vision and the mission statement, then developed the technology piece. In terms of the vision for professional development, I don't think we had any vision except the notion of a learning community - Peter Senge's idea of learning and the learning organization. ...so we took some of the vision pieces from Senge and various other places and crafted this idea of a learning community which would be respectful of diversity and make use of contributions of all the people - as a very heavy collaboration piece. ...And so our vision, to sum it all up, our vision was that we would produce in this collaborative a learning community. We had no outcomes in mind. But the vision was one of a process in which, over time, through building relationships, people would come to respect each other and would value each other's contribution at whatever level it was made. That they would learn from each other (Mike, university representative).

To best summarize the complex nature of the vision building process of the NT-CPDT, Mike (university representative) concludes:

The focus was on learning rather than teaching. So that's the vision - I've just described it. It's community learning with mutual respect through developing relationships over time with a focus on learning, particularly learning of the students in the schools as the common goal of all. But, my point is, the process of developing the vision was not evolutionary. It was not collaborative. It was political. I mean, the whole thing was political.

Political ramifications from the initial vision building phases entered into the implementation phases of the NT-CPDT:

Okay, the implementation was again, my memories of this thing are, it was just a constant struggle. There was not, I mean, part of it was there was no common vision. The inference from it is what I call a "Templeton, the Rat" notion - what's in it for me? And the attraction was - how can we get some technology into these school districts? And I think that was the carrot. That was the thing that brought people in - even in Denton in a lot of ways (Mike, university representative).

The NT-CPDT implementation phase was initiated with planned technology training sessions in the two Dallas PDS sites. One of the barriers to the initial success of the training involved the delay of installing the distance learning equipment:
It seemed to take forever to get the equipment installed. We had even had some training a long time before we even got the equipment. Remember? District personnel from Dallas ISD worked with us on computers. We went to Apple on a Saturday. We also went to the technology conference - before we even started with anyone in our building. But it just took so long before we had equipment in our building - you know, you kind of forget what you learned if you can’t practice. I’m not sure if we even realized what the distance learning equipment was for (Sheri, school representative).

The distance learning equipment was perceived as “a very expensive rabbit trail”:

See all the early focus on distance learning was, in my estimation, a very expensive rabbit trail. We should have been focusing on computer-based multimedia stuff from the beginning and letting the distance learning stuff take care of itself. But it was a sexy piece. It was the kind of thing that they were hearing from the legislature (Mike, university representative).

If we were to learn any lessons, it was certainly to have a plan for using the distance learning lab with kids before it was ever built or else elect to do something with technology that would be immediately useful to kids. Now, the kids have benefited from the technology because there are computers in every room. We’ve got the computer lab. We’ve got this room (distance learning room). So they are benefiting. But we have not had any real direction for what we should be doing with this. So, we have had to find our own answers. Yeah, it should have been planned out before we ever did it (Shiela, university representative).

Mike elaborated on the need for readiness concerning the difficulties experienced during the initial phases of implementation:

...but I remember how dissatisfying all that was because the technology was never there when it was needed and stuff like that. So you’ve got to have - my lessons I would take out of Dallas is you’ve got to have readiness. And readiness takes a long time to develop. And a lot of it’s trust and openness and bridging kinds of things. Then you’ve got to have readiness as far as - well, the equipment’s got to be there in terms of the technology. And you’ve got to have people who actually see a problem that they want fixed rather than imposing it in some way. And so I think that in Dallas, there is a lot of that one-on-one relationship building, informal staff development that resulted from basically Shiela’s (university faculty) efforts (Mike, university representative).

Consequently, the implementation process for professional development in the original Dallas PDS sites “came to be one of working with teachers in incremental ways to
try to increase their capacity” (Mike, university representative). Professional
development was not necessarily structured or planned:

...but what happened most was putting the university faculty - Shiela, and those folks -
on site and Shiela, over the course of a couple years, working with those teachers and
increasingly gaining their trust and increasingly being able to get those teachers to
open up to some kind of change to having our interns in their classrooms and to begin
looking at things in a different way. I think the most popular and successful staff
development that we did up front was the thing on mentoring (Mike, university
faculty).

Shiela (university representative) elaborated on how she perceived the mentoring
skills to develop for the teachers. She felt that the formal mentor training sessions had
been minimal and some of them even “poorly attended.” However, she did feel it had
become an area of strength over time, especially for the mentor teachers in the Dallas
elementary PDS:

I also want to add to that about the mentoring and how the mentoring has developed.
I think it’s much more defined and I’m much more comfortable with it right now
because I think part of it started - we can point a lot back to our initial site visit to
San Diego. And that began... once you can see what someone else is doing, you say,
“Oh yeah. We’re doing that.” Or, “That’s something we don’t want to do.” Or,
“That’s something we definitely want to do.” And you begin to develop your vision.
And also, I think because they realized that no one was going to come in and be able
to tell them some of these parameters of mentoring. And so that’s when they began
to address issues. You know, when we have our little programs - when the people
come through our school for a site visit, different members of the leadership team
address issues that arose and how they solved them. And that’s when I realized how
they had began to have ownership of the program and of what a mentor is (Shiela,
university representative).

The NT-CPDT collaborative set up a series of site visits to school/university
partnerships across the nation during the second year of implementation. At this point, the
collaborative had expanded to include two more school districts, Denton ISD and Aubrey
ISD. The site visits were perceived as the turning point for the initiative:
Also, in my estimation, the turning point for the North Texas CPDT came when we did all those - we used that money to do all those trips to San Diego, Seattle, and Maine. And when people went and saw what is possible and what could be done, then it had effects over and above our investments. For example, the Peace Patrol thing that Hodge (elementary PDS) brought back and started doing. They saw that out there. They took back not only information about what a professional development school relationship could be; they took back information about what professional development could do for the school as well. And so that series of trips, in essence, produced the vision that was never there before. It was those kind of trips that should have been done during the planning cycle. But we were behind in that because we were weighted down with politics (Mike, university representative).

I think some of the individual sites, from what I hear people talk about, I think if they went on those site visits that first spring - people went to San Diego, Seattle, and Maine - I think the people who went to those various places have picked up some of what they saw happening (Kay, university representative).

I really think the turning point of this whole program was the debriefing of even the San Diego trip. That Sunday morning was where we shared ideas and focused on what we had accomplished and what we wanted to do and we borrowed ideas and it changed it for us. I think that was the point in which - that made our program as successful as what it is (Susan, school representative).

Oh, everything! We learned everything from the site visits. We saw three different sites. Two of the schools were partner schools with each other. We really liked that because they were two totally different populations and we were able to see how they set up the technology part of the program and how they were able to teach the interns and how the interns went into the different classrooms. We were able to see scenarios - even the set up of the PDC classroom - something that was totally impacting the students' experiences because we had seen one that was in a portable and the other two were housed inside the school and the two that were housed inside the school - the feeling that the interns (because we did get to talk to the interns) the feelings that the interns had inside the school were completely different from those who were separated from the school - what they considered a bungalow, but it was a portable. In fact, the students inside the school had a lot of ownership of what was going on; where as the other ones described it more of like they were just students there. And so we really focused on how we wanted our program to look. The site visits really helped us get that picture...

...They (the site visits) also showed us how it is to be a mutually beneficial program for both them and the university. Because when you first look at a PDC, you only think about it benefiting the university - or actually you only think about it benefiting the university students. And so we were able to see that it was more like a relationship - ...a partnership trade-off of expertise and skills. We help the university
and they in return would help us. It was our hope at Hodge (elementary school) that our campus would grow a lot from the university’s constant presence (Mendy, school representative).

The site visits triggered team building and vision building activity at specific PDS sites. Mendy (school representative) discusses the process of vision building that occurred in her school as follows:

It was the campus leadership team that went on the site visits. They are elected leaders by the school and the team is composed of administration, teachers, para-professionals, parents - our campus leadership meetings are open so everyone is invited to come. So, we really encourage a lot of involvement. Anyway, when we got back from San Diego, we started discussing the PDC at our meetings. The "ideal" was one thing that we really focused on that planning year. We sat down and we wrote down what a mentor teacher was - what a university supervisor was - what an intern was - what a teaching assistant was. We outlined everyone's responsibilities.

Susan (school representative) shared a similar process that unfolded at her school after the site visit experience:

...but, I think one of the biggest things it (site visit) did was it got the people involved excited, and it empowered them, and it gave us, I think it was - focus. It enabled us to come up with goals. And we got together on our own several times during the summer during our own time because we wanted this program to work. And this was directly because of the trip (Susan, school representative).

I definitely think that (site visit) was the event that led to the gelling of the program. And I think that once we started - you know, I think it was Schlechty that talked about how people are usually concerned with getting everybody to buy-in all at once, where what you need is an excited small group and that excitement builds. And that absolutely has happened here. ...I have seen much less concern after the trip to San Diego about the lack of buy-in. More, I saw problem solving in the leadership team meetings, a willingness to meet after school, and certainly a willingness among those that were really committed to the leadership team to go way above and beyond the call of duty. ...There's a great deal of ownership (Shiela, university representative).

Mike (university representative) shared another example of how the site visits effected a districtwide initiative:
What I saw happening in Denton (ISD) after those site visits is that people came back all charged up, that literally key people in the district, were sold by those site visits, that this was something that would be good and could be done and should be done. ...(A key district person) saw the school in San Diego - or had people report on the school in San Diego that had the classroom. Remember the Chula Vista that had the PDS classroom. We came back and we were building; we were getting ready to build Thomas Rivera (elementary school) at that time. And we asked the architect to explore, and (the key district person) actually sold that idea to the executive council and found out it would only cost us a few thousand dollars at that stage to modify the plans in order to get a multi-purpose room with those two-way mirrors and all other kinds of stuff. And so that’s a fundamental piece of collaboration that resulted from developing a vision based on something that was in existence somewhere else; seeing something else. And so that old Chinese proverb about: “I see and I understand.” That worked there.

The site visits were perceived as “invaluable” and “effective” staff development. Participants experienced having “their own ideas affirmed” and gathered new ideas for experimentation (Shiela, university representative). Shiela humorously concluded, “And we are not above stealing ideas; of course, we’re going to copyright all of our stuff so nobody steals from us.”

After the site visits, the relationship between the university and the schools began to unfold. Dialogue increased between the partners and “tremendous collaborative effects” began to appear (Mike, university representative):

I think there was a period of initial resistance and distrust because of all the political agendas up front, but we overcame some of that. And I give Shiela a lot of credit for building the trust of the people in Dallas and actually having this site which has become a showcase site in a lot of ways for visitors. In Denton, I believe that through my efforts and through some others that we were able to - particularly your relationship with district technology director, all those staff development workshops that you did in Denton - I think that by watching university people working with them on their goals - I think they came to have a lot more trust (Mike, university representative).

And I think, too, since I’ve talked with site coordinators, and I think it happens over time, it doesn’t happen just in a semester or whatever, but I think teachers are
becoming more comfortable with having people around (Kay, university representative).

I was going to say that I feel obliged to- something that I felt being on the leadership team is appreciation and it mainly comes from UNT, I think, in that they do go the extra mile to arrange the staff development, to make sure it's what we need. And they do plan those trips, and it does cost money. And it's like, "Wow, they're doing this for us" (Susan, school representative).

Professional development opportunities began to unfold through various avenues.

The most global training that was shared was via the organization of a technology training cadre:

Anyway, we all met in this room at Denton West High and you were there with like 10 multimedia stations. It was great. I think there were at least two people from every PDS site - about 20 or 25 of us - and we learned how to use those AV machines. You and John even made a video on how to hook up all the stuff - that was a big hurdle for me. But we trained - a lot of training - and then went back to our buildings - we got to take the station back with us - and trained our teachers. Remember, you even helped us schedule our training sessions with our teachers. We trained that entire year in our building on things like HyperStudio and Kid Pix - and we're still training on multimedia (Gary, school representative).

I think the PDC training was really in sync with what we were doing here in our district. It's like it enhanced - really enhanced - what we wanted to be doing across the whole district. I felt that all that training we had with the PDC really put me on top of things - especially with technology. We did all those neat things, remember? ...we even made trainer's manuals for HyperStudio (Ashley, school representative).

I think the multimedia came first. I received the training through North Texas (CPDT) - which was exciting and, I mean really, we came back with so much more knowledge. Then I began training of teachers. We did small groups - sometimes during their planning time and sometimes after school. ...And, as far as technology, I knew nothing. I had never even touched a computer before all this started. And now I have - ...well, I love it. I love training. I love working with teachers, of course, but it's been a challenge because kids are easier to work with than adults. It's true. When you teach kids, they're not intimidated by the machines. They're not afraid to make a mistake. But adults are a little different. They don't want to mess up so they don't even touch it. But today, I can say there's only a handful of teachers in this school that still will not touch one and they're getting closer (Sheri, school representative).
The "vast amount" of technology training was perceived as one of the "biggest" and most "pervasive" training events that occurred (Mendy, school representative). Mendy shared that in her school, the training continued to be ongoing:

Um... I was looking at the calendar just the other day and there is probably a couple workshops coming up that are after school for using the different software the PDS has provided us with. There's probably at least two workshops a month - and on an ongoing basis - even more. Along the same line, the technology liaison trained the PDS (university) students on the multimedia cart (Mendy, school representative).

Training for becoming a mentor teacher was another global arena for professional development opportunity. Various external facilitators were brought in for training large groups of teachers (Shiela, university representative). Mendy (school representative) shared her experience as a member of a cadre of trainers who received training on cognitive coaching:

Another one of the things that we were able to do was the cognitive coaching. That was several days over the summer. I can't remember how exactly I got involved - I think you (CPDT project coordinator) asked me. Anyway, when I got back to my campus - well, it was just one of the things I didn't do full blown because I think it was so extensive and my training in it didn't make me an expert and um... it was just something I shared with the faculty and gave them suggestions on how to use it with their students - copied off some of the ideas and gave examples and um... required the interns to use some of the coaching things during their student teaching. For instance, video taping themselves and so that gave the cooperating teacher a chance to do some cognitive coaching on their end. They were able to do the questioning and the pre-planning, etc. (Mendy, school representative).

Both the technology and mentoring training had components delivered through the use of a cadre of trainers trained for building internal capacity. The trainer of trainers model was perceived as an effective staff development model for "capacity building":

I think the whole - the effects of producing those teacher cadres - I think is one of the biggest pieces in terms of a capacity building structure. Having teams of teachers who are experts in technology, or collaborative learning, or cognitive coaching, or whatever the particular topic is, I think that is a very important implementation effect.
And so I think that we literally put capacity in those schools that were not there before, and I think that principle of having built capacity at the building level is an excellent source - provides excellent potential for change (Mike, university representative).

Other formal types of professional development included participation in "summer institutes," local and national conferences, and workshops delivered on site by university experts (Shiela, university representative). Jill (school representative) expressed her personal excitement in regard to attending national conferences:

And we just got back from a conference in Chicago. And it was a national conference on social studies - a group I had never heard of. And it was their 75th annual conference. I never heard of this group! And here we were - presenting.

Numerous site specific examples of professional development opportunities were shared that were less structured, and unplanned. The following is merely a sampling:

There's just a lot more sharing in an informal way. From when I first got here, what I've seen develop with the teachers is that we've taken teachers who have no background of any type of technology and now they're at a comfort level where other teachers are going to them and asking them questions (Geri, school representative).

But just experiencing mentoring helped me see how far I had come and helped me feel good about what I was doing in the classroom. And it made me appreciate the growth I had made to that point. ...Because it gave me the opportunity of viewing someone who was just starting in the classroom, and it makes me wonder what I looked like when I was starting in the classroom. But I had a very good intern, and it was a very pleasant experience. And it was nice to learn from this. The intern had different strategies, or she wanted to do a different activity with the children, or whatever (Susan, school representative).

Mr. Tay said that last year in a mentor meeting - because I asked them to brainstorm what they saw as the benefits of having an intern - and one thing that he mentioned was number one, it had helped him to grow up in the profession because he realized someone else was watching him and he better be modeling good things. And, number two, he said that it taught kids that two adults could cooperate rather than compete (Shiela, university representative).

You know, I think the leadership team assigning mentors has been good. When it (the assignment) comes from the leadership team, it's coming from one of them - you
know, from other teachers. And so when we assign teachers as mentors, it's not like it's coming from administrations so there's not the conflict. They just accept it. They just do it. And there's not the conflict. And I think that that it really helps these teachers grow when other teachers are saying, "I think you're competent. I want you to be a mentor" (Geri, school representative).

And I think that they (the teachers) have learned from that (being treated as experts) as well as with the ideas that the interns are bringing in. I see several teachers trying new technology that they haven't been able to use before and they're taking different risks in trying new ideas. For example, last year I had one student who was just on the ball all the time. I mean, a lot of energy. I paired her up with a teacher who had a lot of energy. They were just a couple fire crackers together. Anyway, one thing the intern did was bring in some incredible science experiments and I know that the teacher is still using these experiments this year. One that really sticks in my mind was one on electricity as a conductor. The intern lit up a pickle. She did real dramatic experiments that grab the children's attention. The teacher has really used those this year. It's a real give and take relationship and I think that that's been the biggest thing for all of us (Mendy, school representative).

...it also seems to me that some of the teachers certainly are looking to the site coordinators (university faculty) for some staff development. Some of that occurs in very informal ways, just through meeting or stopping by to talk to somebody after a class or talking about a student and how we might better help the university student acquire some skills. The teachers start seeing things and saying, "We need mentor training. We need to learn about gangs." Some of the kinds of things that our (university) faculty are now providing for the students, they are now being asked to do the very same thing for the teachers. "If it's good enough for the (university) students, then we need it too. We need to know how to plan better lessons. We need to know how to be more inclusive in our classrooms. We need to know how to accept diversity or how, you know, - to use better teaching practices for children who are linguistically diverse" (Kay, university representative).

University faculty were also perceived as benefiting from various informal professional development opportunities:

The university faculty, some of them are being exposed to it (professional development opportunities). Some of them are choosing not to avail themselves to the opportunities and they're coming along probably the slowest of all the groups, however... for some faculty it (NT-CPDT) is helping their development. They're becoming more knowledgeable using technology, and some of that technology I don't think we would have had without the Center. ...Some of our faculty are trying very hard with their students to practice what they preach - by getting out into the schools more themselves - it's become obvious that (university) faculty are spending more
time out in the schools, perhaps planning and meeting with teachers and principals and planning course instruction (Kay, university representative).

The various informal and formal professional development opportunities have provided groundwork for personal and professional change for NT-CPDT participants:

But I think by working together and by planning the learning experiences, by planning curriculum, by some of the teachers, you know, actually being responsible for some of the instruction... They may come and talk to the interns during some seminar or during some of the classes that are being taught out there on site. So, I think they're beginning to have more ownership of the kinds of learning experiences that the undergraduate students have (Kay, university representative).

I think, going back to what I said earlier, they're (teachers) treated more like professionals - feeling more like experts. The teachers that I have come into my class as experts, I recognize them in our newsletter. I think it is very important to be recognized. I think that is one of the things that our teachers are really seeing - that they can be an expert in something (Mendy, school representative).

...I think most of the (university) site coordinators have grown professionally because of this involvement. As I hear them talk, they have had to rename courses; they have had to change the way they teach; they have had to change assignments; they have had to get out there and be present part of the time, and even do demonstration lessons. So, they have had to change (Kay, university faculty).

I think that teachers, and again maybe not all of them, but certainly those who have been involved, I think they feel a sense of empowerment - that they have some control; that they have input; that their opinions, their skills, their knowledge are valued and are important (Kay, university representative).

I'm going to go back and mention the networking between the faculty, the Cowart faculty and the university faculty, just for a minute because I think without that we would not have had the opportunities that we've gotten to be able to travel and to present and to even participate in programs that normally we probably would not have even tried. And just the fact that we had someone here from the university just to kind of say, "Okay, you can do this. Let's do it together." For example, we were able to write - and receive a grant for this telecommunications thing we were doing with another school in Guatemala (Jill, school representative).

And I would also like to tell you that I did - talk about opportunities - as one of the co-chairs, I had the opportunity to go on many different monthly CPDT statewide director trips and it was something to find out at some meetings that our group from our particular CPDT had a vertical team while other teams only had big, important
people. And it was always refreshing to see that you could come in and you could be a part of a group of people and not be intimidated by all the Ph.D.s (Jill, school representative).

Oh wow, I don’t know where to begin. I think I used to think of myself as just a teacher and there is not a bone in my body that says that anymore. I do a whole lot more communication. Looking at myself two years ago, before I began being site coordinator and looking at myself now, I can’t believe from point A to point B. I am willing to tackle any kind of problem, - really. In the past, I would have kind of put it on the back burner for a bit, now I’d just as soon take it head on because - I don’t know - I think it’s because there’s so much going on all the time that I don’t want anything hanging over my head. There was a time when I would have just lit it stew, and now I won’t. You know, I just take care of it and it’s much less painful than you think it’s going to be anyway (Mendy, school representative).

Students, university and K-12, have benefited from the professional development and growth of teachers and university faculty:

I guess the effects again are probably somewhat informal, as opposed to a very formal research study type of thing, but our (university students), I think, even though sometimes they’ll complain about how much time it takes, and it’s a real commitment and they can’t do that and work 40 hours a week - but I think when our students come out they feel better prepared. I think our students develop a sense of camaraderie with the other students who are in the program. They’re not isolated. ...And I’m assuming they must be better prepared because so many of them are getting hired. Dallas is hiring many of our graduates. Some superintendents are seeking our PDS graduates (Kay, university representative).

These children (K-12) - they have an experience of another warm body there that’s going to show them affection, give them attention. That’s what it is and so what they’re having is maybe two interns a year, so that’s three people, not just the teacher, they’re having three people who listen to their stories (Geri, school representative).

I think probably for most of the children it’s been a positive experience. From the initial limited information it seems to me the children are performing better on TAAS tests, over the time, and again, since these kinds of tests tend to be based on minimal competency, I’m not sure you see a lot of change, but it seems to me in what is viewed as just our increased presence in the schools or to other kinds of efforts that the schools are doing - it’s all hard to sort out - but I think the children are doing better, scoring higher on TAAS tests. And I guess it just kind of intuitively makes sense to me that if you have more adults in a setting, then children have more access to adults to guide and help and all those kinds of things (Kay, university representative).
As the NT-CPDT has attempted to pull out of its muddied political waters, collaboration has prevailed in various site specific examples. Sheila (university representative) expressed that "somehow the right ingredients have fallen into place at this school" and that ingredient was defined as "collaboration." Jill (school representative) stated that it was "the ownership of decision making that gelled us together." Mendy (school representative) shared that she believed that the first and foremost important thing for success is "team building." Mike (university representative) concluded with the following lessons learned:

In order to have a collaborative, you have to have commitments from all the partners in the relationship that will work above all to make that relationship work. You need to have relationship readiness. You need to have collaboration.

Regional Collaborative Center for Professional Development and Technology

I gathered limited data from the Regional Collaborative Center for Professional Development and Technology (RC-CPDT) located at Laredo State University. My initial contact resulted in a successful interview, but subsequent contacts did not take place. Two scheduled phone interviews were canceled by the interviewees and my remaining phone messages were not returned. Consequently, I was unable to schedule a site visit or set up contacts. I was able to collect documents from the state funding agency. The following case report is based on one interview, and the following state report documents: Final Report (Regional Collaborative Center for Professional Development and Technology [RC-CPDT], 1994), First Quarterly Report (RC-CPDT, 1994-95a), Second Quarterly Report (RC-CPDT, 1994-95b), and Second Quarterly Report (RC-CPDT,
The Final Report (RC-CPDT, 1994) provides the following description of the collaborative:

The Regional Collaborative Center for Professional Development and Technology (CPDT) located at Laredo State University (LSU) is focusing primarily on the preparation of preservice elementary Bilingual and Early Childhood Education teachers who will be capable of successfully working with individuals from different cultural, ethnic, linguistic, socioeconomic, gender, and academic backgrounds. Through a collaboratively designed university field-based teacher education program involving LSU faculty and administrators, Laredo Junior College (LJC) faculty and administrators, teachers and administrators from selected public schools in the Laredo, United, Zapata, and Cotulla ISDs, and support from the Apple Computer, Inc., Region I Education Service Center, Mi Laredo, Southwestern Bell, and other business and governmental entities, preservice teachers are being prepared to become certified educators. These teachers will be able to utilize innovative teaching and learning practices including the use of technology, to better educate elementary school children, many of whom are often at high risk of experiencing academic difficulties and eventually dropping out of school. Consequently, all students are expected to become literate, lifelong learners, who can communicate and work effectively with others, manage and utilize resources wisely, including technology, and successfully adapt to changing situations in a global and dynamic society.

Since the inception of the Laredo Regional Center for Professional Development and Technology, numerous educators from the University, the public schools and the community have interacted to deliver the proposed program. While the program was collaboratively designed and based on the most current research, some modifications and changes had to occur for the program to succeed. As is the case with any innovation, continuous assessment and refinement was, and still is, taking place. The CPDT Collaborative and its governing board continue to work diligently to refine the teacher education program...

The RC-CPDT was one of the original eight state funded CPDTs which received funding for the 1992-93 school year. Vision-building and planning sessions were initiated. Mary (university representative) described vision-building processes as follows:

The process - okay - what we did was we just tried to follow the guidelines. We looked at, you know, well what kind of composition do we want to set up in terms of our governing structure, you know, and the people that are going to be partners - those kinds of things. ...We looked at the fact that we wanted to have mentors from the public schools pretty heavily involved because of the fact that they're the ones that really know what's going on in the field. So, we had them, we had
administrators, we had - uh- from the public schools, from the university. We had
faculty and administrators. We had partners like Apple Computer. So we tried to get
all these people working together...

...then we all came together and we went through a process where we - well, we had
a series of things we did. We had a consultant come in and we looked at... what were
the advantages; what were the challenges; what were the solutions. ...And we all sat
around the table - board style - and each one had an equal voice.

...And that’s basically what we did. And that’s how we developed the model for the
blocks - and how we were looking at field-based education, and the staff development
component - everything.

Vision-building activity resulted in the creation of the following vision:

...our vision was to develop mutual trust and respect for each other, you know,
between the public schools and the university and all the other partners, so that we
could work collaboratively to plan the model program that we wanted our students to
go through. And essentially that’s what we did. And we wanted to produce the best
teachers possible...including their ability of being highly skilled community forces.
You know, being able to use technology, and being able to integrate life-long
learning, and all those things that we’ve talked about (Mary, university
representative).

Initial planning sessions also resulted in the development of “ideals” for university
students, classroom teachers, and university faculty. “We came up with a series of
indicators that would tell us - competencies for students and qualities for mentor teachers”
(Mary, university representative):

...we had a lot of brainstorming, you know, and we just threw out ideas about what
kind of teacher we wanted working with our university students. Some of the things
were: they’ve got to be creative; they’ve got to be risk-takers; they’ve got to be
innovative; ...highly-skilled communicators.

So, the collaborative designed the competencies for the university student and the quality
indicators for the mentor teacher. Mentor selection, however, was the responsibility of
the principal in a particular building. The principal was provided with the quality
indicators prior to selection (Mary, university representative).
As PDSs began developing in the RC-CPDT during the 1992-93 school year, a variety of professional development opportunity unfolded for all participants including university students, classroom teachers, and university faculty. Site specific needs emerged, especially in regard to technology training and mentoring/coaching practices.

Professional development opportunities were reported as follows (RC-CPDT, 1992-93):

University faculty and participating interdisciplinary team members (ITMs, public school teachers) agree that students are beginning to demonstrate the application of theory to practice. During a staff development session on mentoring and peer coaching, an ITM expressed that “field based education exposes preservice teachers to the reality of the classroom.” Students are beginning to ask ITMs questions about lesson plans, integrated instruction, and assessment.

ITMs are becoming involved as mentors and peer coaches to preservice teachers and assisting them with content and practices which enhances the university students’ understanding of the teaching/learning process. Further, ITMs are also becoming more involved in learning about and using technology in their teaching. Their interest in the use of educational technology was demonstrated recently when they participated in a mentoring and peer coaching staff development session in the Laredo State University Macintosh Lab. They walked into the lab and immediately turned on the computers and started using them while they were waiting for their session to start. The presenter had to encourage them to turn off the computers.

University faculty participating in field based instruction have expressed that it has encouraged them to become more reflective and creative in their own teaching. Moreover, education faculty working with the faculty from the Arts & Science Division noted that interpersonal relationships have been strengthened resulting in higher quality instruction. As a result field-based instruction, according to interdisciplinary faculty is developing into a true collaborative where numerous team members participate in restructuring education into a unified endeavor of the real world.

I have limited documentation for the 1993-94 school term. Mary (university representative) describes difficulties that began to emerge the second year of the initiative:

I would say it began the second year when we went to institutionalization, you know, and we had to do certain things - then our (university) administrators started balking at the idea that now we’re going to have to put up the money to do these kinds of
things and so they started bringing up all kinds problems. ...it seemed like every time you turned around, we had an obstacle...

...mostly, I think, yeah, I think it goes back to money issues. I think, also I don’t think we, you know, when you look at the university ...when you look at the research on collaboration, it says that you really have to have support from the top, from the president, from the provost, from the dean, in order for, you know, teacher reform to thrive. I’m not sure that we ever really had total commitment from the president. I think he liked the idea of - we got the grant, - we’re going to do all these things, but, yet he never came out and said, “This is what we’re going to do and this is why we’re doing it.” We constantly, I think we encountered problems with Arts and Sciences, also with education, because some people were so resisting reform. They wanted to do things the old way...

Mary (university representative) felt “things started to break apart” in February of 1994:

...by the summer of ‘94, you know, we had problems, but we always made it through those problems. And I thought, “It’s going to be all right.” But it wasn’t. Because in fall of ‘94, I was out most of the time because I got sick, and then there were a lot of program changes that were made without collaborative input from the (governing) board, you know, to the program and those kinds of things. ...(Administration) just came in and said, “This is what we’re going to do. Students are complaining. Therefore we’re going to do these things.” And the board was never involved. It was just the College of Ed.

Mary (university representative) elaborated that the composition of the board was “completely” changed at this point.

Despite the problems that unfolded in the governing body of the RC-CPDT, professional development opportunities for participants in the field continued. Mary described the collaborative as offering “lots and lots of staff development on technology.” The quarterly reports (1994-95a; 1994-95b) provide an extensive listing of technology training sessions that were delivered. The “integrated curriculum” also was an area of emphasis:

...we wanted our students and our mentor teachers thoroughly familiar with integrated curriculum and the need for integrating curriculum in our public schools. And so our students, we have a seminar every week, and we have an integrated
session every week where we try and tie in - these are block activities that tie the whole block together. ...Like - for example, I taught the language arts before, okay? And I used to have to teach - I always had them do thematic units - the process of integrated curriculum. I no longer have to do that because now it is part of what we all go through. ...It's not taught in every single course anymore. So, it frees up some of that course time for us to do more content with the language arts.

Technology and multicultural skills and concepts also are integrated throughout the curriculum (Mary, university representative). Staff development efforts have focused on areas similar to the preservice program:

If you look at our staff development, these are the things we focused on: technology, mentoring, multicultural, integrated curriculum, assessment, and so basically, I think there were five areas that we've worked on for the first three years. Those may become different. Those people become pretty proficient in those areas. Then also, I feel like you need to continue to touch base, you know, with those kinds of things that they've already learned and then add some new things to it (Mary, university representative).

Most of the training was delivered by "in-house" experts (Mary, university representative). A train-the-trainers model was implemented and a cadre of participants was sent for specialized training and then charged with the responsibility of returning to their campus to train others. For example, "We had people go to some of the ASCD professional development series, and they came back and did some work with their own teachers in their schools" (Mary, university representative).

Mary (university representative) shared what she perceived to be effects that the RC-CPDT had on participants. She started with discussing the university student:

The preservice teachers have, I think, a very good handle, or better handle about what teaching is about. I think they understand the teaching-learning process a lot better. We have had a handful of people that are graduating already, and we can already tell from their ExCET scores that they're higher than the ones that have not gone through the CPDT, but the numbers are very small. ...They seem to be - the pre-service teachers are very different. That's all I can tell you. They're different from the one's that went through the traditional program. They're - when they go to student
teaching, they're almost like first-year teachers, you know. And they're able to handle themselves very well in the classroom. They're very poised. They're very able to deliver instruction.

Mary contributes part of this success to the "increased collaboration and all the contact they have now with university faculty and mentors as opposed to what they had before."

Through increased field-based experiences, the university students have more "opportunity to talk with" professors and mentor teachers.

Mary (university representative) also shared her perception on the benefits to classroom teachers:

Classroom teachers are better informed, I think, about the teaching-learning process. And I guess, they have acquired strengths that they didn't have before - like technology. They knew a little about all the areas, I would assume, but now those areas are becoming more included in the kinds of things they do daily. ...I also think the mentor teachers are learning from the interns and vice versa.

As for university faculty, Mary (university representative) stated, "You know, the way we teach is very different from the way we taught before." She elaborated:

...we have more input from student, you know. It's not like in the past - when maybe there was more lecture rather than active involvement with the students. I see that happening more and more - the students work together in groups. There's more higher order thinking being emphasized on our courses, in getting student to decipher themselves.

Mary contributed some of the growth experienced by university faculty to an increase in reflective learning and research:

The reflective teaching. We do a lot of that. We're constantly working with students to reflect, and think about what they are seeing happening. You know, how do you tie theory to practice.

Mary (university representative) described role changes that she perceived to unfold due to the RC-CPDT:
Well, I think people are more involved. I think their self-esteem - teachers' self-esteem, I think, has gone up. I think everybody feels good about what they're doing. If you look at the social, the emotional kind of impact that it has on a group - the idea that we trust them and they trust us, and that we respect them and they respect us, I think has made a tremendous amount of difference with the mentors - you know, working together with the (university) faculty. And the students, too. There's more professionalism among these groups.

In summary, Mary (university representative) reflected:

...We all work together to support what we're doing because we're totally committed to helping students become better teachers, which is what it's all about. That part is there. It's just a matter of getting through these other kinds of things at the university level. It is a tremendous barrier right now.

Results of Case-by-Case Data Analysis

*Southwest Texas Center for Professional Development and Technology*

*Pattern 1. Classrooms of the Future: Creating and Re-Creating Site-Based Visions*

*Vision.* The question that created the content of the SWT-CPDT vision was shared by Jan (university representative):

...If the public school teachers - if their classrooms are going to be the classrooms of the future; if their classrooms are going to be the teaching rooms - the teaching hospitals, so to speak, for our interns, then what do they need to look like?

This question led the way to creating a common mission statement and site specific goals and action plans. *Collaboration, technology integration, and student-centered* classrooms were envisioned as initial areas of concentration (Jan, university representative; Jeanna, school representative). The SWT-CPDT vision was designed to support an *inclusionary* implementation process of professional development opportunities in these areas of concentration for preservice candidates, inservice teachers and university faculty (SWT-CPDT Brochure, 1995b).
Each emerging PDS in the SWT-CPDT collaborative was given the freedom to create their own vision based on answering the leading question. For example, Bowie chose to create their *classroom of future* by *integrating technology* across the curriculum, using technology as a tool (Jeanne, school representative). Kyle elementary, a fertile environment for technology integration, chose to continue efforts in integrating technology across the curriculum and enhanced their vision with *integrating thematic instruction* (Cynthia, school representative). Each PDS site was given the freedom to chose their focus.

*Enactment.* Ideas for creating the *classroom of the future* unfolded through a series of **formal** meetings. The university invited the public school people to initiate *brainstorming sessions*:

Originally when we started this whole project, it was an interesting collaborative effort because the university people actually started by just saying, "We don't know anything without our public school people. We need our public school people to really understand" (Jan, university representative).

An external facilitator was brought in to lead *team-building activities* and these initial brainstorming meetings paved the way for numerous *planning sessions*. The planning sessions were initiated after two elementary schools were "on line that very first semester" (Jan, university representative):

I began to meet with the team of university block professors and the advisory group at Bowie, which we call a core group of teachers. We actually had *retreat days* that we worked together on their goals - their focus (Jan, university representative).

Site visits to exemplar schools were also conducted:

We also had a lot of site visits to places that are actually doing it. And so, you learn by watching and by doing. And so we go to visit and the Center provided us with that opportunity. We visited quite a few schools that run their classrooms this way.
Once we determined our focus, then we would find any schools in the area or around that had that, and then we would go visit them (Sara, school representative).

**Informal** events also nurtured the vision-building process. *Increased dialogue* between university participants evolved into planning, prioritizing, and integrating course content together (Jan, university representative). Site visits formed pictures in participants minds and encouraged dialogue (Sara, school representative). Collaborative efforts broke barriers between the university and the schools and ideas and resources were pooled and shared:

The collaboration between university and school faculty has been a major switch in that the university people are not bringing their programs and their syllabus onto the campus and directly implementing it. Instead, they are coming to groups of teachers and administrators on campus and saying, “How should we implement this 12 hour block” (Jan, university representative)?

**Effects.** Vision-building events varied from site to site. Building leadership was a critical factor in this process. Jan (university representative) shared that the schools that have “principals as visionary leaders are moving faster than other schools.” For example, Kyle Elementary had spent at least one and a half years creating their own vision prior to becoming a PDS (Cynthia, school representative). They already had fertile ground for PDS implementation. Bowie Elementary experienced a change in district level leadership that was perceived as having an effect on their technology focus. The previous leaders was described as “pro techy,” “visionary,” and “very plugged into what we need in the year 2000” (Jeanne, school representative; Daren, school representative; and Julie, school representative). They were uncertain about the new leadership.

The vision was also affected by implementation. The original question - the mission - kept the participants focused, however, visions were revisited and adapted after
experimentation had been initiated. The following quotes provide an example of how the

*vision evolved* for the Bowie Elementary PDS:

Basically, the vision was that we had no vision at the beginning. At least where I was concerned. I didn’t know what to expect - where we were going, or anything. We knew generally what we wanted - technology in the classroom - make it student-centered. But, I didn’t know what that meant at all (Daren, school representative).

It was an evolution because they (Bowie teachers) wanted it (technology) to be integrated and they talked that talk, but they didn’t quite know how it would look...

...You know what they discovered? When they began to change their focus of the classroom, and the fact that they let their children be more the center and not they as the teacher - the whole issues changed. Integrating technology became much easier (Jan, university representative).

So, insights from the vision building *processes* led to implementation needs, but the participants were not ready to understand their vision or aim their focus until actual implementation occurred.

Bonding experiences between participants were shared that occurred during team-building activities and planning meetings. University block teams were perceived as “liking” the camaraderie of “*team teaching*” and “planning together” (Jan, university representative). Jan also shared that the university participants experiences frustration with the amount of *time* and work the initiative demanded of them. “The time for them to do research and writing on top of the PDS involvement is so difficult for them and they are *tired*” (Jan, university representative).

Being part of the planning processes has *empowered teachers*:

It is so wonderful to watch public school teachers change when university people say, “You’re the important ones. You’re in the field. You tell us how it should look when it’s done” (Jan, university representative).
Jan shared an example of a conversation she had with a teacher in regard to feeling *empowerment* with planning PDS events:

She looked at me and it was such an “aha” look on her face and she said, “You know, this is just a tiny thing, but this to me is what is meant by empowerment. Teachers feel that they have to ask permission from their principals or from somebody to do things. And you have caused us to feel that if it is best for kids, we don’t have to ask permission to do it.”

Core planning teams were built into the content of the original vision as an organizational structure to support site-based vision-building and decision-making processes. The original core planning team included a group of teachers from Bowie Elementary, one of the first PDSs created in the SWT-CPDT. It was this team that set the pace for future core planning teams.

One of the first tasks of the core planning team was to determine a focus - a vision for their classrooms of the future. For example, Bowie’s core planning team chose to focus on “integrating technology” into the curriculum and “child-centered classrooms” (Jeanne, school representative; Daren, school representative).

The core planning team also discussed vision processes. Hayes High School core planning team discussed their vision of creating communication across all grade levels:

We’re always so concerned about what we are doing on our campus - ...it’s kind of like target practice with a big barrier and you’re shooting an arrow over the barrier. You don’t know where the target is. It’s over there somewhere. And you’re hoping that you hit it, because we don’t have communication from the elementary schools to the junior highs to the high schools to the university level. And yet at every level it’s always, “They didn’t do this or that...” And this way we’re all going to work together and hopefully, you know, we will produce what we would like to attain ourselves - the communication is very important (Angela, school representative).

The Hayes core team provided another example when discussing their vision of “providing realism” for the university students. They focused on providing an
environment for the university student who allowed him or her to “not just sit in the
classroom, but participate in different classrooms and see what administrators do and what
the counselors have to deal with and walk the campus and get out and participate in the
extra-curricular things” (Bernice, school representative).

Pattern 2. Formal and Informal Staff Development: Sites, Summers, Saturdays; Connections and Disconnections

The core planning teams were also charged with designing a plan for implementation
of their vision. The Bowie Elementary core team, with the help of the university block
team and the support of the SWT-CPDT, were able to implement a variety of formal
professional development opportunities. They conducted site visits to exemplar schools
known for their technology integration and student-centered environment. As Sara
(school representative) shared, “You learn by watching and by doing.”

The Bowie core team also shared a list of professional development opportunities that
they either facilitated or attended, including events such as: state and national
conferences, summer institutes, Saturday workshops, and summer computer camp. Sara
(school representative) added that she taught Southwest Texas students about technology.
Julie (school representative) added that she represented Bowie Elementary on the SWT-
CPDT evaluation task force committee.

The core team also shared various informal opportunities for professional
development - opportunities that were not necessarily planned in advance. For example,
they began to dialogue with university professors about restructuring teacher education
coursework being delivered on-site:

The university professors were real interested in what we were doing and in what
really happens in the classroom, and expressed that and made sure that we knew that
our opinion counted and what we, that we were the ones that were going to pretty much set the pace for the interns and pretty much tell them what we wanted them to do, not what they wanted them to do (Jeanne, school representative).

The Bowie teachers also found themselves participating in *increased dialogue* with visitors who came to observe their accomplishments. Jeanne (school representative) shared, “I really like being able to share what’s happening in the classroom - you know, we have visitors all the time that want to walk through our classrooms and want to see what we’re doing.”

*Effects.* The initial focus on *technology became a motivating force for participant involvement* in the initiative. Julie (school representative) shares her feelings as things started up:

Yeah! Yeah! I would have never done it (participate in the CPDT) without the technology. I mean, I probably would have been the same old person. I didn’t realize that, you know, my attitude was, “Oh, it goes around in circles. It’s just going to come back. It’s just a new fangled thing.” But this was like all of a sudden we had money to do things - we had - I had technology. ...And then all of a sudden, I’m doing it.

She also shared how her newly acquired enthusiasm rippled through to her students:

And when I became enthused about the technology, the kids became enthused. And my Southwest Texas students, too. I’ve really developed some really wonderful relationships with these girls and boys. You know, I mean, they - I feel like, you know, they got a good start here (Julie, school representative).

The Bowie teachers shared a variety of experiences that they perceived as *empowering.* Sara and Daren shared feeling that they had after a series of original planning meetings with university people:

I couldn’t believe these professors were actually valuing what I had to say. Because I always thought they never knew really what was in the real world, you know? And there they were - in our world - and they wanted to listen to my idea and value my planning (Sara, school representative).
I was on the original evaluation committee. And I was there with a bunch of mega people, you know, with degrees as long as your arm. And I was really impressed - the moment I went in there they were very in tune to what I had to say. You know, they wanted to know what the classroom teacher did and they were building from there on out (Daren, school representative).

Jeanne (school representative) shared that she found the university professors to be very open and accepting and she felt “real comfortable” around “pretty much any of the professors at the university.”

Teacher empowerment was also experienced in leadership activity. For example, attending and presenting at conferences led them to discover that they were leaders in the field (Jeanne, school representative). “Not just receiving, but delivering” staff development made Jeanne feel more like a professional. Having dialogue with visitors about the schools accomplishments gave Jeanne a “sense of pride” about her profession. “Just that kind of recognition for our kids and for us - really, really is powerful” (Jeanne, school representative).

The Bowie core team also addressed the issue of isolation. “I don’t feel isolated anymore - ...like I’m in my classroom all day long and no one else knows what I do, except me” (Jeanne, school representative). Daren (school representative) shared that he sensed “a real connection” with his fellow team members.

The process of establishing the original core planning team resulted in a strong bond that connected the team members. Jeanne (school representative) described the team as “a family” and Sara (school representative) remarked that they “had shed a lot of tears together.” The concern for alienating other teachers was expressed:
You didn't want to alienate anybody and yet to save time we felt like we were entitled to some of the privileges because we were working real hard at real long meetings. And we went through a lot of ups and downs. It was a fun year. It really was. We got to be real close, because any time you go through something like that, I mean you get to know each other real well (Jeanne, school representative).

As the SWT-CPDT expanded to include more PDSs, the original core group experienced some alienation effect themselves:

And also, the CPDT is spread out where it includes more people now. So, I miss the little group. I know that it had to end sometime, but I miss that. I mean, I liked all that close knit family orientation (Jeanne, school representative).

I think it has been hard for the people running the CPDT, too, because they're having to spread out so much now and go to so many different schools. And that's just got to be. But at first, well, they were just always there for us. ...And now it's like, "Gosh, now they're not here." But, then I just got over that and realized that they didn't have to be here every minute. They have still been very supportive whenever I've needed something (Julie, school representative).


Vision. A variety of professional development opportunities surfaced during site specific vision-building processes. Core planning teams and block professors collaboratively planned professional development agendas and the SWT-CPDT supported the emerging needs. Professional development opportunities for technology integration remained a constant content arena across all sites (Jan, university representative; Linda, university representative). Even schools that were already technology-rich, chose to enhance technology integration through the PDS. For example, Kyle Intermediate, was able to enhance the school's technology further by extending technology training to preservice students who were field-based on their campus (Cynthia, school representative). Other site specific needs that emerged included content such as: mentor
training, inclusion, constructivism, and integrated curriculum planning (Jan, university representative; Cynthia, school representative).

**Enactment.** Methods of delivery also varied from site to site. Formal events, such as site visits, were made available to all new PDSs as they joined the initiative. Technology training events occurred in large groups and small groups with external and internal experts delivering instruction. Training cadres were organized where representatives from sites received training with the intent that they would return to train the teachers in their building (Jan, university representative; Cynthia, school representative). Cynthia (school representative) shared that even though they used training cadres to building internal capacity, there are circumstances where external facilitators were more effective:

We have decided that with this particular training (ITI), we need outside people to come and talk to our entire faculty. The cadre got the book and read the entire ITI materials, but we didn’t feel that we could give it justice within to share with all the other teachers. So, we brought in a consultant (Cynthia, school representative).

Linda (university representative) described another process for delivering training, specifically, technology training:

Instead of teaching a technology, like multimedia or Internet, at the onset, I give them sort of a sampling of several different types of technology skills. I introduced an entire menu of topics. After the introduction, I find the ones (participants) that are interested in taking off in a particular direction. They become the experts and the trainers.

**Informal** professional development events also occurred. Classroom teachers were exposed to the many ideas generated by the university students:

...With professional development, the teachers not only were having (university) students coming and working with individual students and in groups and getting benefit from that, but also they were seeing the innovative strategies that they (university students) had been taught in the block program. So, our teachers were
I think it (SWT CPDT teacher education program) has had a big impact on teachers, because they are getting more hands in there (the classroom). We have (university) students experimenting with technology and they (the teachers) see that...good ideas and good lessons. And then the teachers say, "Well, wait a minute, you know, I could probably do that when I do mammals." This is kind of a progressive thing, and so I think the impact is that it opens teachers' eyes (Barbara, school representative).

Classroom teachers also perceive opportunities for growth through reflection:

And I think when we talk about what we’re doing, we see what we do ourselves and we can see some things we don’t do right, ...maybe right isn’t the word, but we see not as we’d like to - when we talk about it. And we can improve ourselves (Helen, school representative).

Linda (university representative) defined a "back door" method of training that she perceived to happen with university faculty. She explained it like this:

The professors get out into the schools. They see what the teachers are doing. They see what the university students are doing. This is what opens their eyes much more than any training sessions. It’s their presence in the schools that has initiated growth in using technology...

...because the interns present their projects at the end of the semester. So, the professors are seeing 30 technology integration projects. And I think that’s why we’re starting to see professors all of sudden go, “Oh wow! I think we should do, you know, these types of activities.”

The “back door” method provided an avenue for training university faculty who were identified as “the most challenging group” (Linda, university representative). The majority of university faculty tended to have difficulty getting over the wall of “I’ll do it all myself” (Linda, university representative):

...I think professors just in nature have a tendency to just do everything themselves,...All the training (for them) has been on an individual basis. By individual basis, I mean that when they have a problem, they call me. As far as experiencing what all they can do with the potential of the technology, they never get over that wall of “I’ll do it all myself” (Linda, university representative).
Effects. Collaborative teacher development opportunities that emerged in the SWT-CPDT provided a rich mix of lessons learned and growth opportunities. One of the major vision pieces involved talk about integrating technology and creating student-centered classroom. The participants discovered that the two nurtured each other:

And the staff development, specifically in technology, the staff development that we provide in areas of student-centered learning, that makes a difference in the successful integration of technology. ...I have yet to see a teacher-centered classroom that is effectively implementing technology, and I could not even tell them how to. But, I have seen many student-centered classrooms implementing technology effectively all over the place (Linda, university representative).

Collaborative professional development opportunities had effects on the participants:

The personal plus for me doing this is just having a contribution to the field in general. I think we all want to think that we’ve positively had an effect” (Julie, school representative).

I think the CPDT as a whole has been able to provide a professionalism that teachers didn’t feel before by making them a part of all the decisions that are made (Linda, university representative).

The work that we did at Bowie actually empowered those teachers so much that it was one of them most exciting things - because they had not had that opportunity. We had many teachers that had never been to a national conference and we sent them to ASCD last year. I can’t describe what it did to them. It’s like something opened up in them to see things differently - expanded their horizons (Jan, university representative).

Experts emerged during technology training sessions that were not perceived as previous leaders. Linda (university representative) shared:

I would have never been able to pinpoint her as a telecommunications person from the beginning. But we gave them an introduction session about the Internet. She took off. She is now our Internet expert.
The multimedia - we took 25 teachers for two weeks ... and one teacher took off out of that whole group. And now she’s our multimedia expert, but we never would have known it.

Various teacher development activity resulted in learning about the process of providing professional development opportunities. For example, participation in *site visits* created a “synergy” among the schools that “traveled together and spent the night together that was incredible” (Linda, university representative).

The on-going nature of delivery methods, such as the development of internal training cadres, provides a *follow-up* component to the training in some situations:

We’re using technology facilitators in the schools and they work with the teachers and the interns in their blocks. Now, we’re having a bit of difficulty two of the blocks, so what Linda has done is actually work with the professors herself in coming up with a syllabus so that we have determined what we want the students produce. In those situations, Linda does the training and the follow up with the interns (Jan, university representative).

Linda (university representative) shared a lesson that she learned regarding the delivery of technology skills for the interns:

And so we had designed a syllabus that tied technology to their curriculum, which I liked. Then we started a student-centered approach and I thought - these are not student-centered activities. I am not modeling a student-centered approach to them. I’m assigning them the activity, and they’re turning it in, which you know I like those activities, but I really wanted to do it this way. So what we went to was teaching them less. And we had been getting feedback from the interns that we were covering way too much in the technology class. I mean each week was a new skill and they were just massive. I mean, they were telling us that they wanted to spend more time with each thing they were learning. ...So, we teach fewer skills now, but I feel we have a stronger product overall. I learned, you know, that sometimes “*less is more.*”
Pattern 1. The Confluence of Virtual Reality and Emerging Visions: Intersecting Restructuring Missions

Vision. The vision for three PDS initiatives emerged simultaneously at Texas A&M University. The Texas Education Collaborative (TEC) was state funded as one of the original eight Centers for Professional Development and Technology (CPDT). The vision created for TEC was multi-faceted. Gary (university representative) describes TEC's vision in terms of restructuring aspects of critical pedagogy by infusing theory into practice and building technological and social infrastructures to support the restructuring effort. He describes critical pedagogy as follows:

Some of the precepts of critical pedagogy are that teachers are change agents and the democracy that is present in their classrooms is present in their lives, so they become more than deliverers of instruction. They become active agents and active negotiators - active advocates in the students' lives. That means community involvement - that means a change in terms of the culture of the classroom. It means a change in terms of what gets validated in the classroom as far as what are viable outcomes. It gets changed in terms of the governance structures of the classroom. When you look at other initiatives that are looking at restructuring, one of the salient arenas of restructuring is the professional lives of those teachers. How do those teachers go about their professional lives? What sort of scheduling variables are you dealing with? What sort of activities are validated as part of teachers' lives?

The Secondary Education Collaborative (SEC) at Texas A&M simultaneously evolved. The SEC's mission was to redesign the secondary education program and develop PDSs based on William Glasser's (1992) Quality Schools and Theodore Sizer's (1992) concept of Essential Schools (Gene, university representative). The vision for redesigning the secondary education program was:

...to be done through a collaborative process where we would have insights from the practicing teachers, from public school administrators, from our colleagues in the
various disciplines, from our colleagues in the College of Education, and those of us directly involved with teaching courses on campus...

...It was clear to us in higher education that the public school arena was taking ownership of the redesign as well as the university. This set a precedent at Texas A&M University because it was saying that the public schools were playing a major role, not only in the redesign, but in fact, they were also making a commitment to the program's implementation (Gene, university representative).

During the development phases of the TEC and the SEC, the elementary education program also initiated restructuring efforts. In particular, a professor from Texas A&M took a sabbatical to gather information regarding model professional development schools (PDSs) as defined by the Holmes Group (1986). After his return to the university, he designed a special topics graduate course on PDSs. It was this course where the "seeds got planted" to develop elementary professional development schools (Stephen, university representative).

_Enactment._ All three initiatives started by pulling together representatives from the various university/school partnerships for _formal_ collaborative planning sessions. Participants from the SEC and the elementary program were invited to the TEC _collaborative planning sessions_, which initiated the intersecting of initiatives.

The TEC held a planning _retreat_ that took partners through a consensus building process for creating a mission statement illuminating the ideal in education as well as the barriers in reaching the ideal. All-day _workshops_ were held for university faculty to explore the organizational structure of teacher education programs. A technology _integration task force_ was formed to redesign upper-division teacher education courses for the integration of evolving technologies.
A TEC Coordinating Council was formally established as the policy making body and involved representatives from Texas A&M University, Prairie View A&M University, TEC partner school districts, and the region Education Service Center. The TEC Coordinating Council held discussions involving budget, technology purchases, and teacher education restructuring efforts. Each TEC partner school had a site council involving at least one site coordinator, two teachers, a building principal, and business, parent, and ESC representatives. Main topics of discussion by site councils were defining roles, technology, staff development, budget expenditures, and field experiences for teaching candidates.

The SEC also entered into a series of formal gatherings. An invitational conference was held to initiate planning and attendance represented practicing middle school teachers, practicing secondary teachers, public school administrators, and university faculty from each of the disciplines and from the secondary faculty from the College of Education. Participants formed various committees, including: (a) a Proposal Planning Committee charged with the responsibility of coming forth with a framework for the secondary redesign, (b) Phase Development Teams that prepared plans for implementation, and (c) Oversight Committee that reviewed for overlap.

The elementary initiative unfolded more informally. For example, David’s (university representative) graduate course on PDSs opened the door for principals and teachers from three elementary schools to enter into dialogue with the university, which resulted in the development of a PDS on each campus. A similar example occurred when two teachers from a junior high school entered upon dialogue with the university during
summer school in regard to site specific restructuring efforts occurring in their school.

Allen (university representative) became interested in the school’s focus and started *interacting* through *site visits*. When TEC invited the junior high school to become a PDS, Allen had already built a relationship with the school and requested to become the university liaison (Allen, university representative).

**Effects.** As the three initiatives intersected, components of each vision also connected and I discovered difficulty in separating and assigning specific effects to one particular effort. Gary (university representative) describes the process of how various initiatives at A&M fed into a “broader notion of restructuring” and he specifically highlights the A&M-CPDT initiative as being a part of this process:

In one characterization, the CPDTs, as with any externally funded temporary initiative, is a virtual reality, not a natural reality. The CPDTs in this initiative are the seeds, the virtual, that are being planted. But, because we are looking at constructs like institutionalization and because we’re looking at constructs like demographics, that’s what we’re really dealing with. So, for example, can you separate establishing an Office of Minority Affairs or Student Affairs and the virtual notion of the CPDT? No. They both feed into the broader notion of restructuring (Gary, university representative).

Gary (university representative) continued with his perception of effects regarding the TEC vision:

First let me say that the only thing that we’ve really done justice to in my eyes is the *technological innovation*. In so much that that is part of the original vision, I think we’ve done a fairly good job in terms of enactment in carrying that vision through and conceptualizing it. As far as true *collaboration* - maybe. We have faculty working with schools - sometimes by choice - sometimes because it was mandated - sometimes by a little coercion. So, this has been a collaborative and it has all the characteristics of a collaborative in so much that that was a part of the original vision. So, along those two strands (technological and collaborative), I think we’ve had a very *inclusionary model*, including students, preservice teachers, inservice teachers, administrators, faculty, and it has been an initiative that has the hallmarks of that sort of involvement...
...But as far as changing all the "rubber beneath the road" in those classrooms in terms of what sort of instructional preferences get privileged; what sort of instructional strategies get marginalized - no. That's going to be a long time coming and it's going to be the hardest fought battle (Gary, university representative).

Participants were effected by the PDS initiatives. Roles and responsibilities changed. Teachers became consultants to the university for delivering field-based methods courses. University faculty built mentoring relationships with the teachers as they became involved in teaching preservice courses (Allen, university representative; Stephen, university representative). The teachers and professors began to build a team teaching approach and university faculty began dealing “not only with the theoretical, but also the practical” (Gene, university representative). Teachers began to take on professional responsibility for preparing future teachers:

The uniqueness of our program (SEC), we believe, is that it is going to be fully implemented with the support of our colleagues not just on (the university) campus, but of our teachers who are going to be willing to take our students in their classrooms, work with them, come into the methods classes as consultants. Seeing this as their role to preparing future teachers and part of their professional responsibility as opposed to: is the university going to pay me for these times or efforts? ...I think the uniqueness of it is that it is not going to be dependent on state mandates or state funding. Rather on ownership of the program which will allow us to participate on a professional service basis (Gene, university representative).

Teachers felt empowered by increased respect:

Well, I think this (PDS) model shows confidence and respect for the classroom teacher. Because it's, "We want you as part of this team to prepare your future colleagues." And that's the kind of underlying theme here (Stephen, university representative).

Teachers were perceived to have increased feelings of professionalism:

And I think it (involvement in a PDS) has raised the teachers' level of professionalism in that there's a - they're on display every single day. And they're modeling for these preservice teachers. How do you teach math with manipulatives? What are your true
reading philosophies? Do you use phonics? They're modeling all those things for these students (Jana, school representative).

University professors also experienced *role changes* by being on public school sites more frequently. Stephen (university representative) felt that professors developed a "closer bond to the university students by being in the schools more." Allen (university representative) described the *level of involvement* necessary for implementing a PDS program as a limiting factor for non-tenured faculty:

"You know, all of us who do this (PDS liaison work) do it on our own time. We teach our regular load and work with students here on campus, and then instead of working in the library, or writing, or spending time on research, we do this (PDS liaison work). When you look around, most of the people involved in this, almost without exception, are tenured associate and full professors. Our assistant professors cannot take a risk on the PDSs for research because the research is not quick. It's not something that you can grab your data in six weeks and run with. They can't afford to do it because of the time factor. They have to spend their time writing. As for me, it's been great. It's like a luxury to me."

The process of joining PDS initiatives at Texas A&M has benefited all partners. The TEC has provided financial support for enabling technological and social infrastructures to develop (Gary, university representative). The SEC and elementary education program have provided collaborative program designs for creating secondary and elementary PDSs (Gene, university representative; Allen, university representative; Stephen, university representative). All three initiatives have intersected their missions to better prepare teacher educators.

**Pattern 2. Technology Staff Development: Capacity Building to Reduce Isolation**

*Vision.* The original vision of the TEC was two fold: (a) to carry the "hallmark of an *inclusionary model*, including students, preservice teachers, inservice teachers, school administrators, and university faculty in all decision-making processes" and (b) to
emphasize the acquisition and set up of technology hardware and software and to provide appropriate training (Gary, university representative). The technology portion of the vision took precedence during the first year of the initiative as the collaborative focused on building a technological infrastructure (Gary, university representative).

Tina (university representative) perceived the TEC as providing “a vision of authentic activity for the people who are training to be teachers.” She elaborated:

And the vision that I have is from the viewpoint of training preservice teachers and connecting those preservice teachers with the real life of this school. And, so in terms of the media, preparing them to use technology once they get into the classroom, and to develop technology as part of their teacher training.

Martha (school representative) extended the vision to involve public school children:

...our initial vision was to get the kids away from the isolation of a rural setting and also to give them the technological vision to be competitive in the world of work.

Elizabeth (school representative) elaborated:

The one thing that we were wanting was for the students to be intrinsically motivated - we felt we needed to bring them something that went beyond just our desire for them to be successful. And one of the things that we felt was that the technology would offer them that - that intrinsic “I want to get into this and I want to know some more and use this, the toys, if you will, to make those kinds of things happen.

Enactment. Implementation of the TEC initiative was described as a two phase process:

The first phase was infusion of technology into the curriculum into the public school itself. The second phase of that was really the big push and focus as far as getting the teacher education part into the schools (Martha, school representative).

The “lion’s share” of the TEC funding was put into building a technological infrastructure (Gary, university representative). Compressed video systems for distance education were installed in the PDS sites and universities. The purpose of the two-way
video and audio systems was to foster interaction between PDSs and universities and to remove isolation factors.

Multimedia equipment was placed in varying degrees at each PDS, depending on site specific needs. For example, one of the PDSs, an intermediate school, chose to have a teacher presentation station installed in each classroom. Another PDS chose to purchase laptop computers for teacher checkout. The site councils were charged with the duty of determining what their campus most needed. After the equipment arrived, phase two earned its title of "technology carrot" and the school partners jumped head first into discovering and exploring with their "new toys" (Martha, school representative):

It took us an entire year to learn about the technology. We felt it was important to have our own feet on the ground before we could make a dramatic impact on preparing teacher educators. We needed first to understand the hardware and software, and then we needed to discover how to use it in our curriculum. This takes time and lots of training (Martha, school representative).

To infuse technology into instructional content, a formal task force was organized to redesign upper-division teacher education courses for the integration of evolving technologies. Technology visionaries involved in this process were sent on site visits to schools out of state and in Texas that were high technology schools:

We went to visit a school in Louisiana that's heavy on technology. And we went to conferences and events to learn as much as we could before purchasing any equipment. It's too bad we couldn't have taken even more people with us to get the big picture (Jerry, school representative).

Another formal training method was the development of a train-the-trainers model of delivery. Some PDSs formed technology cadres of teachers who received intense training by attending workshops, inservices, and conferences so that they could become the experts and train other teachers on their campus (Janet, school representative). The
purpose of the technology cadres was to build internal capacity so that the PDSs could become less dependent on external expertise. Initially, new technologies and strategies were introduced by university experts. As each PDS grew their own experts, professional development opportunities were provided in-house on an on-going basis:

A&M was instrumental in sending people out to train small groups of teachers. As time elapsed, we did more and more of our own in-house staff development. ...We have people on each campus now that pick up these things more quickly than others and we use them to share it. So, we do a lot of our own staff development now on an ongoing basis, but we still depend on A&M to introduce us to new technologies (Jerry, school representative).

Janet (school representative) also shared how her school used benchmarks as a successful model for pacing technology training. For example, the first benchmark was to read e-mail twice a day, the second benchmark was to use the electronic gradebook, and the third benchmark was to use the LCD display in a lesson plan. These benchmarks were spread over a three year period of time and were identified through administering the entire staff an assessment of the levels of use as described in the Concerns-Based Adoption Model (Hord, Rutherford, Huling-Austin, & Hall, 1987).

Informal professional development opportunities evolved through interactions between all levels of participants. For example, student teachers were introduced to multimedia applications and were assigned to implement multimedia as part of their field experiences. Classroom teachers became interested through the help of their student teachers and multimedia exploration pervasively swept from university students to classroom teachers to school children. University faculty became more interested as they experienced first-hand examples of integrated technology as implemented in the PDSs
University professors learned technology by "seeing it in action":

This computer on my desk? Frankly, I’ve learned more about how to use this thing since I’ve been working in public schools than I ever have at university. You learn by seeing it in action (Allen, university representative).

**Effects.** The focus on the technological infrastructure during the initial phases of the TEC initiative demanded that attention be *concentrated on equipment* and installation processes, not on practical application:

The pragmatics of the situation were that the first year, almost without exception, we tried to work out how we were going to collaborate and how we were going to get technology into the classrooms. Given that, there was very little room for looking at applications and performance indicators. A fairly realistic view emerged immediately that it was going to take a long time to get things in place before we could even start addressing the idea in terms of the *vision* (Gary, university representative).

Once the equipment was installed, vision components relating to "isolation" were addressed as follows:

I have to believe that the biggest effect has been the one guiding thing that got us involved to begin with and that is the fact that we wanted to break out of the *isolation* that we were experiencing. The isolation is not just distance around here, but the isolation was also attitude. The isolation is very different in a rural environment and it’s easy not only to have your kids become isolated, but also to have your teachers become isolated. They feel like they can just do their own thing and whatever little difference it would make. So, they lower their expectations. I think that the use of technology has made it all open up like flowers. The telecommunications have *broken down old walls of isolation*. We’re raising our expectations as professionals and raising our expectations for our students. Even parents are expecting more from us now (Elizabeth, school representative).

The process of being able to connect via telecommunication and collaborate with each other provided benefits for both the schools and the university. Tina (university representative) stated, “This *connection* is so important. To keep the collaboration going, we need contact with each other.”
Participants across the TEC collaborative were effected by the implementation of technology. Jerry (school representative) elaborated that classroom teachers were accepting more responsibilities for technology training. The shift from outside consultants to in-house experts created teacher empowerment. Leaders emerged that "had never shown any signs of leadership qualities in the past" (Martha, school representative). Some classroom teachers developed strong expertise and trained university faculty. University faculty also learned technological skills by watching technology "in action" at the PDS sites (Allen, university representative).

Pattern 3. Formal and Informal Processes for Building Relationships: Circle of Collaboration

Vision. The notion of school/university partnerships in the Texas A&M CPDT was initiated with a vision that emphasized building a social infrastructure that would support collaborative efforts and respect autonomy:

As you look at individual school-university partnerships, in fact, they look at different characterizations and they look at different ideological underpinnings. That's the way it ought to be if you've validated the autonomy of each partnership all the way along the line, which we have. So, although part of the mediational aspect of the dialogue is grounded in Goodlad's postulates (Goodlad, 1986), there's been no mandate. ...the over-riding principle is that you learn to ensure the autonomy of the sites and ensure that the voice of the school is paramount. If there was a perception prior to the initiative, it was that the university has for too long told the schools what to do (Gary, university representative).

So, the vision was to bring all partners to the table to collaborate in restructuring efforts. Janet (school representative) described the vision as having a dual purpose, benefiting all partners:

I see the creation of the professional development schools ultimately changing the course of teacher's education, but at the same time, and happening together even, is
the enriched experience for the students at our school. I see that all happening along with the training with the teachers and with the university people.

For classroom teachers and university faculty, the vision meant team-building and relationship building. For university students, it meant “authentic activity” as they were training to be teachers (Tina, university representative).

For some participants, the vision meant breaking patterns of isolation:

The first thing we looked at as far as the campus and the district was concerned was the fact that we felt very isolated, where we were in this with our rural population. We felt like in order for our kids to really be able to be competitive in the real world that we were going to have to open that isolation and get them to where they were interacting with other people who were different from themselves and find out that there was another world out there... (Martha, school representative).

**Enactment.** Various formal events supported collaborative efforts. In the beginning, vision-building retreats and collaborative planning meetings were the vehicles that brought partners together (Gene, university representative; Gary, university representative; Janet, school representative). Planning efforts transformed into shared professional development events. For example, workshops and institutes for dealing with diverse populations were planned and provided for all participants (Gary, university representative). Technology training opportunities were provided including site visits, conferences, and workshops (Jerry, school representative).

Informal interactions were another source for collaborative opportunities. Allen described how informal site visits to a public school led to the development of a university/school partnership:

I had had two teachers from that particular school in class one summer, and during break and before and after class, we would be talking about thing they were doing in their school. So after the end of second summer session, I went out to visit (the school) a day. ...I enjoyed visiting. And early in the fall, I started visiting once a
And then in October, it increased. And right now I spend an average of three days a week out there in the school. ...so, I requested that I be appointed as liaison out there because I saw it as the chance to really learn something about what goes on inside schools that I didn’t know, and I needed it for my teaching here on campus.

*Increased dialogue* led to *increased levels of involvement* for university professors and public school administrators and teachers. Professors *mentored* classroom teachers who became involved in teaching university methods courses (Stephen, university representative; Allen, university representative). Professors learned through discussions with classroom teachers about relevant content for their university courses (Allen, university representative). Classroom teachers became more involved with preservice teachers and professors became more involved with public school environments (Stephen, university representative; Allen, university representative; Janet, school representative).

Martha (school representative) concludes that both formal and informal professional development opportunities were effective:

> And it’s all of these factors working together, the *interaction* with our other schools, the *interaction* with the university, the constant *inservice teaching* and sending our people out to get on-going knowledge - is what makes us strong and what makes us successful.

**Effects.** During *vision-building retreats and collaborative planning sessions*, barriers were broken that had existed between the schools and the universities:

I think I come from a unique perspective because I was a teacher at the time the CPDT started. It was a very unusual experience for me because I had been involved with other projects, but I had never been invited by the Dean of the university. They were asking me what I thought about how things should be done and how did I think teachers would accept this and that. And it was at that first retreat that I saw true *collaboration* and the *breaking down* of barriers. We all used first names. We didn’t identify each other in any other way and professional status was not an issue. I began hearing about collaboration - and more collaboration. Now I look back and realize that we were doing it right there and then. Friendships were formed and networking
began. That, I believe, is the real heart of the TEC. I call it our circle of collaboration (Janet, school representative).

The circle of collaboration effected participants. Gene (university representative) describes how the SEC initiative effected himself and his colleagues:

Let me tell you what it has done for me and for my colleagues. All we are saying to one another is we cannot believe how exciting this is to us and how it has brought us together as a faculty. We really are collegial now, so that we are constantly taking to one another. ...It's a collaborative...you don't feel alone, you are together.

Role changes emerged for participants. University professors assumed new roles including “instigator, facilitator, as well as a support and follow-up person for the public school people” (Allen, university representative). Allen elaborated that these new roles “energized” him. Classroom teachers also took on new roles. They teamed with university professors to teach university courses, speak at conferences, write grants, and participate in research. This increased level of involvement with university professors “empowered” and “professionalized” them (Allen, university representative; Martha, school representative).

Professional growth for participants was inspired due to collaborative networking and increased dialogue between partners. For example, Janet (school representative) stated:

We (public school participants) learn from the university and the university learns from us. It's really a transformational kind of thing. I see it (the collaborative) as having a dual purpose; the creation of professional development schools ultimately changing the course of teacher education, but at the same time, enriching the experiences for students in our schools.

Another interviewee expressed, “It really helps to encourage sharing of information when you’ve developed a personal relationship and interest in the people involved” (Jerry,
The process of collaboration was viewed as the glue that held the initiative together:

These are real people that I've come to know and respect professionally. This is the netting, the foundation that holds us all together. I feel that there are probably a lot of things that will stop when the money stops, but other things will never stop as long as we have this foundation of collaboration with each other and mutual respect for what the other person does (Tina, university representative).

Jana (school representative) described partnering as follows:

It's all about perception. The university is not seeing themselves as coming in to fix what's wrong with the public schools. Instead, they are looking for reality. What's working right here? What can we learn from you?

The process of collaborating was perceived as requiring a lot of effort from the participants. However, Gene (university representative) differentiates being “tired” from “burn-out” as follows:

We are tired in terms of all the effort we have put into this, but we are excited about the implementation of this program. It keeps us going. I don't thing burn-out will occur because of the collaboration. When I say that - it means that all of the burden isn't going to be on my shoulders, so when I'm in that classroom ...teaching on site, I'm going to have practicing teachers sitting in with me. ...it's shared responsibility. It sure lightens the burn-out aspect.

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Vision. Data analysis indicated that respondents perceived collaboration to be a major highlight for professional development within the content of the SFASU-CPDT vision:

It seems to me that the initial thrust of the program design was to get everyone clear on the concept of professional development schools. You know, what is the vision of PDSs? How can we better collaborate with our partners to not only improve teacher
education, but how can we improve schools at the same time (Amy, university representative).

Collaboration was described as a process to “pool our resources, our ideas, our personnel and have staff development that encompasses university people, school people, and our students; instead of everyone going off in all different directions” (Amy, university representative). As the center moved forward, this inclusionary model of collaboration “changed the flavor of staff development” (Amy, university representative). The vision was perceived as “changing the paradigm for all people involved” (Joanne, school representative):

University staff and public school people began to have the same types of staff development and they began developing a common language with professional and instructional issues. Previously, the university was looking at their vision as pertaining only to university students. We were looking at training only our staff to improve the achievement of public school students. So, I say that the bottom line of the whole vision was to provide a common language, common objectives, with the end results being that of improving what students learn in public schools. We are all interconnected in that process. We all see that now (Joanne, school representative).

“True collaboration meant speaking the same language” (Molly, university representative). The respondents echoed terms such as “common philosophy,” “common playing fields,” and “common language.” So, the vision of collaboration through partnerships and “shared staff development” was perceived as a unique aspect of the SFASU-CPDT (Myrna, university representative). Interaction between participants was seen as the avenue for change:

And that was the original vision - that the interactions at the site would cause change in the university professor - cause change in the public school teacher and administrator - cause change in the intern - and in the final summary, cause change in the performance of students based on these interactions (Joanne, school representative).
Enactment. The vision of collaboration unfolded through the enactment of various formal events, including initial participation in site visits:

The first major staff development was site visits to other professional development centers. ...the site visits allowed these people - university people, public school teachers and administrators, and central office fellows - a time to talk. And as I understand it, these site visits were very beneficial at the early stage. They came back and became a little more specific in terms of what their needs were (Amy, university representative).

Collaborative efforts also emerged from initial organizational structures that guaranteed governance structures representative of all partners:

A 39 member board, representative of teachers, professors, administrators, education service center staff, and the community, guides the CPDT and decisions about its activities are made by action teams that concentrate on the various components of the effort (SFASU-CPDT Final Report, 1993-94).

The collaborative efforts of the action teams were perceived as the "key" to the success of the initiative:

The site professors are at the PDS site on a daily basis and they form action teams that continue to meet and feed each other. These action teams address site-specific issues and occasionally form ad hoc work groups. To me, the site professor and the site-specific action teams are the key to the success of each PDS (Kim, university representative).

To me, the site professor is the key, along with the action teams meeting on a regular basis. Both of those - I think if you just have the site professor only without the action teams, you would be missing some things because those groups bring in some additional ideas. But to me, they have been the key to whether this thing works (Amy, university representative).

As committee structures emerged throughout the collaborative, formal processes for conducting meetings and building consensus were identified:

Well, it seems to me that there was a growing recognition that what we were involved in needed facilitation skills. For example, different committees came forward with a need for this: "We need facilitator training; we need training on how to better run our meetings; we need to have consensus training." ...It's like the people took on new
roles and the new roles had demands for new skill, especially in being able to work more closely together (Amy, university representative).

Facilitation skills became a major component for staff development and *external experts* were brought in to deliver the training.

The vision of collaboration was also enacted by the accumulation of *informal events*. Collaborative decision making became the vehicle which led to new levels of *interaction* and *communication* between the various participants. Respondents reported that the tone of communication had changed between the university and the schools:

> I think, too, that before it was the university telling the public schools what we wanted them to do and so forth. Where now, we’re on the same playing field, talking the same language, making collaborative decisions. Before, I think the university was “here” and the school people were “there”, at least in people’s minds (Kim, university representative).

> Instead of the university telling a classroom teacher what they wanted the student to do while in their classroom, we worked collaboratively with the mentor teachers and basically, based on their input, determined the kinds of experiences for the content. The mentor teachers were willing to meet with us periodically to give us feedback (Molly, university representative).

Collaboration opened the door to *different ways of interacting* between teachers, professors, and students. The following examples are merely a sampling:

> It’s not the individual workshops and training sessions per se that have created the professional development component of this initiative. It’s change. Change in the way people do things. Change in the way they interact. Change in the way they practice their skill for the art of teaching. The whole field-based model was the basis for staff development. It was not the workshops. It was on-the-job type of training where the people came together and learned from each other. ...When you put the professor on the campus, and we put the students on the campus, and we had teachers there - learning took place - learning from each other (Joanne, school representative).

One thing that I would like to say that is when we were establishing the sites, the mentor teachers involved worked with the site professors to determine the kinds of experiences as well as the content that they felt should be taught at each site. ...and
the mentor teachers were willing to continue to meet with us periodically to give us feedback. We had a very open kind of thing where we could meet with them in a formal way or informally to make sure that things were going okay (Molly, university representative).

The teachers that had interns, I think have learned as much and are as excited about what they are doing as the student interns are (Joanne, school representative).

Amy (university representative) summarized the formal and informal processes of collaboration as follows:

Collaborating, talking together, and this is something new - certainly there had been dialogue between the two groups (university and schools), but with the Center (SFASU-CPDT), it formalized a process and it also made it less formal, too. Because all of a sudden the interaction was more real.

Effects. The vision-building events that occurred during the initial phases of the initiative provided a scaffolding for professional development that was flexible and uniting:

I think that “fly-by-the-night” requests for staff development didn’t emerge because from the very beginning, there was a core group of people - principals, teachers, administrators, university staff - that developed this common philosophy, this common goal. So when we got to the staff development, it was a group of people that agreed, that developed a needs statement, and that looked at all kinds of staff development in writing the program. So that these things were talked about, and the group had consensus - consensus from all parties - is because they were all in it from the planning depth (Joanne, school representative).

The original vision also addressed the notion of collaboration leading to increased interaction between participants and “that the interactions at the site would cause change” in participants. Joanne (school representative) summarized this notion with the statement, “And that’s what’s happened” (Joanne, school representative).

Due to the various collaborative efforts implemented in the SFASU-CPDT, the collaboration piece was perceived as “continuing after the money is gone” (Amy, university representative):
My best advice is - Keep the collaboration going and be careful to not let just the university do it. It’s got to be jointly done and if it is jointly done, it can be tremendously powerful for the university as well as the schools.

Collaborating and having time to talk were perceived to have specific effects on the participants. A variety of changes in participant's roles and responsibilities were shared. For example, “the facilitator role was enhanced for all - the university person as a facilitator and the teacher as a facilitator of learning” (Amy, university representative).

Mentor teachers became more involved with helping professors plan content for course delivery. Molly shared, “Based on their (mentor teacher) input, we determined the kinds of experiences for the (university course) content”:

...I feel that the university professors and the public school people are on the same page with regards to what training - of what future teachers should look like (Molly, university representative).

Other role changes for mentor teachers were perceived as follows:

I think our mentor teachers have become more aware with their practices. They are more engaged in professional development. They read more educational information. They are wanting to do things differently. Proposals I get from teachers to make a change or do something new are now usually from mentor teachers that are beginning to think of innovative ways to improve their instructions (Joanne, school representative).

I believe one thing is that the mentor teachers has a total new paradigm picture of the training program for students that are going through as an intern. I believe they really feel that they influenced that, they participated in it, and now they have a totally new picture of the kind of students that will be graduating as a teacher (Robyn, school representative).

Kim (university representative) elaborated on the toll that a highly collaborative initiative can have on its participants, especially in regard to “time”:

Time. Time made it difficult to pull everything together. Even though it was collaborative, we’re still a small university working with small school districts in East Texas. So, there is just X number of people to do all the work. Sometimes people
may have felt spread a little thin. Particularly at the beginning, when all of a sudden you were expected to be on more committees and have more committee meetings. Everything just loaded on top of existing loads (Kim, university representative).

The process of collaborating has also affected the initiative, especially in regard to the way that information becomes disseminated among partnering entities. The following example describes the on-going, revolving nature of professional development as it works in the initiative’s collaborative environment:

...One thing we talked about in the reading clinic is how during the first semester the interns, the reading clinic students, and the public school students learn the technology together. The second semester, a new teacher comes in, a new intern comes in, and the (public school) student then teaches the intern and the new teacher. So, our students, we think, have actually developed staff development (Joanne, school representative).

Along those same lines, technology integrated into instruction has really been a big step that I see in our district from our teachers learning from our interns and student teachers. ...And just the products that we do now have totally changed in their appearance. They are much more professional looking. And the teachers are now trying to integrate technology into their instruction. I believe that is a direct effect of those university students on the teachers - just from their being there and being familiar with the technology (Robyn, school representative).

**Pattern 2. Communication and Connectivity: No More Walls**

**Vision.** In order to support the increasing communication among participants, two processes were discussed during the vision building stages. The first process involved the need to break down barriers between the schools and the university so that “shared staff development” could occur and “partnerships” could develop (Myrna, university representative). Team-building and vision-building events were planned to address these needs (Amy, university representative).

The second process was to create a link via telecommunications that would connect people and places, making the process of communication easier:
One example at the very beginning we realized that because of the site-based part of this program, that communication between the various people once they're off campus was going to be difficult. Electronic mail was going to be emphasized heavily. Then we realized that the schools didn't have very good access to it. For example, one machine and one modem in a whole school building was not enough. Another issue that we talked about - that sort of came into process was distance learning or distance communication. A concrete example of that is that we had an idea that we could have a professor sitting here on campus, or a technologist specialist, or someone sitting here on campus, and they could talk to the groups of the students out at the various sites ...through a telephone conferencing system (Rubin, university representative).

Enactment. Informal events occurred to remove the walls - the barriers - between partners. The university encouraged the concept of all participants “being on the same playing field” by removing the use of titles and degrees when addressing individuals during meetings:

In the beginning it was also the openness of the university staff. (Their) openness to invite us in - in a non-threatening way was a big asset. Teachers came in and felt very comfortable...

...So, to me, when I first realized we were becoming a true collaboration - or a true team, I think goes back to first with... who was becoming Dean of the School of Education. He was a very personable person and he got rid of all the titles and all the barriers that were between public schools and universities. He insisted that we all be on first name basis when we came to meetings - we were all just participants. He broke down some of those barriers so there was not “Dr.” or “Mrs.” - and we seemed to come together as a team (Joanne, school representative).

As the walls came down, people started sharing more with each other. Joanne (school representative) shared:

We had a lot of experts that weren't communicating with each other - sharing information. And there were a lot of people who weren't really open to it. Now it just seems that it (SFASU-CPDT) has opened everything up. People began to learn from each other.

While team-building events were occurring to break down barriers between the university and the schools, telecommunication efforts were being initiated to further
enhance the process of communication. *Connectivity occurred* through a series of formal events that preoccupied the initial phases of the initiative. Purchasing and installing technology equipment necessary for telecommunication links became a major focus, as well as a frustration:

I’ll be honest with you. From the very beginning, and I think Rubin would agree with me, we gathered this whole technology component in terms of what types of - what pieces of equipment actually we would put out there. We spent all our time talking about that kind of stuff. And we didn’t focus so much on software application (Lynn, university representative).

...so, we bought a telephone conferencing bridge that would allow 12 conferences to take place and we bought UNIX conferencing units to sit on table in a classroom. Again, with the idea that you could communicate with these groups of students, and you wouldn’t have to physically always go out there to the site. ...We do use the conferencing switch itself, but not in the fashion it was originally proposed (Rubin, university representative).

Where as much as you’d love to be well-researched and well-founded on all the ins and outs - what equipment’s good, what works, what doesn’t, - you can’t. Time is a real issue, the crunch factor. You just run out of time. You can’t read enough. You can’t get everybody together to talk over all the issues. And, decisions are just made that aren’t really well-informed. We love to think we make the best decisions of all, and I think we’ve come up with a good CPDT team. Honestly, we have a good product. But boy, getting there is scary. The technology was advancing quicker than we were (Lynn, university representative).

The issue of advancing technologies was shared by many. Rubin shared, “You just can’t catch up to it and it seems you can never make a good technology purchase.” David discussed the “experience lag”:

There is such an experience lag. Once we put it (the technology) in the school system, the teachers didn’t understand it. It took maybe a year or even two to get them to even start using Microsoft Word. And then they started realizing that they could maybe use LCD projectors, but by that time it was almost too late. We’d moved on to something else (Troy, school representative).
Regardless of the frustration that occurred with the focus on equipment, the need for telecommunications persisted. "I can’t emphasize enough how important it is to keep that connectivity and communication link with a field-based program" (Rubin, university representative).

Effects. Technology equipment drove decisions during the initial vision phases and led to decisions that were unrealistic for implementation purposes. Rubin (university representative) described this effect as “a gap - ...the technology group had a little farther vision than was actually the realistic expectations from the classrooms.” The vision for technology did, however, keep the initiative focused on communication and interaction. Rubin felt that “time” was the answer and that as connectivity was “made available to folks,” they’d start interacting. He perceived it was starting to “snowball” and people were “starting to catch on to it.”

Opening paths of communication had effects on participants, especially concerning university and school participants in regard to feelings of isolation:

Everyone that was field-based was so isolated from the university campus. Our students were isolated. Our mentor teachers were isolated. Our site professors were isolated. We wanted to get rid of that isolation, so we put electronic communications in place connecting the university to the public schools. I can’t emphasize enough how important it is to keep that connectivity and communication link with a field-based program (Rubin, university representative).

It was very difficult to get professors to want to go out to the sites and be totally isolated from the university campus. They are very sensitive about tenure and being seen on campus holding office hours. They want to get credit for that and they want to be in the loop. That’s the term; they talk about being in or out of the loop. Well, one of the reasons we were able to get professors out to the sites was because they were guaranteed access to connect to campus via telecommunications on a daily basis. I’m a professor out at a site and I’m not out of the loop (Lynn, university representative).
Communication was also increased when teachers experienced university professors as being "on the same playing field." Removing titles and using first names "increased the level of comfort" between the professors and the teachers (Joanne, school representative).


I keep going back to this article that we read a few months ago in Electronic Media, the one about the car in the jungle. It’s the neatest little story. Until we started doing these kinds of things, like hooking computers up with CD ROM and LCD panels and Internet, a computer was really kind of like a car in the jungle. The author in that article said that if you happened upon an automobile in the middle of a jungle, and if you were a native who had never seen a road or knew what a car really did, you would go up to that car and you would open that door and say, “Wow!” And, somebody would say, “Start this up. You can set this button and it gets cool. Wow! Air conditioning! Neat! Reclining seats. Hey, there’s even a sofa in here. I can sleep in here. You can close the doors and windows and mosquitoes can’t get you. Turn that radio on. I’m telling you, this is great. Stereo, too.” They would look at how wonderful all the gadgets were, but never connect with what the real purpose of what a car was, which is where the wheels meet the road. That’s how a computer is. See, we tend to set it on a desk and do a little word-processing, a little database, and a little spreadsheet, but we never connect with what a computer really can do. We’re just playing with gadgets. We’re not getting the computer out on the road and going. Well, we’re starting to do that now. That’s part of the vision. But it’s certainly a new challenge (Lynn, university representative).

Vision. As the story reveals, the process of developing a vision is ongoing and evolutionary. Connecting the “gadgets” to a “purpose” is where the “wheels meet the road.” For the SFASU-CPDT, this connection began to surface after implementation phases started:

I mean, I think we had a vision, but no one has ever done this. You can’t go out and read about it, you just have to jump in and do it (Kim, university representative).

I think that one of the things that helped the Center and the vision is that they did jump immediately into implementation. Very much like Michael Fullan’s discussion of “ready-aim-fire” - we had an initial idea - they sent the teams off - they had the discussion - but then just started. ...as you’re going through it - it is clarified and
clarified again. ... as new needs evolve, we define the program and try to meet them (Amy, university representative).

For example, defining the mentor teacher was an “evolving process” (Molly, university representative). As a team of teachers reviewed mentor teacher applications, they engaged in an on-going process of determining what would make an effective mentor teacher. They initiated the process by identifying the “master teacher,” but concluded that what was more important was that the mentor was someone “willing to change, wanting to improve, and willing to question their own practices” (Robyn, school representative).

The emerging vision began to emphasize the site specific needs of each PDS. “We realized that their needs were very different and we could not make all our sites alike” (Molly, university representative). Technology and collaboration continued to be professional development needs across all sites. Other site specific professional development needs included “mentor teacher training, diversity training, middle school education, and 4MAT training for curriculum integration” (Myrna, university representative).

Enactment. A series of formal and informal events occurred to address the site specific needs that emerged with the evolving vision. External and internal facilitators were accessed for different purposes:

Internal is just the on-going and hard to identify - ...where you are continually modeling and developing groups of learners. Externally, you are presenting some strategy or model of something to be carried back and do the internal kind of growth using it (Robyn, school representative).

For example, the Center discovered that internal facilitation for mentor teacher training was more effective than bringing in external experts because each site needed to address
it's "own mentor teacher needs" (Kim, university representative). "An outsider would bring in a canned program that really wouldn't have zeroed in on some of their needs" (Amy, university representative). External experts were mainly used to "build up internal capacity," resulting in a "train-the-trainers type of event" (Amy, university representative).

I think that one of the problems that we have had the last three years is that there is so much staff development and so many wonderful things going on that there is just not enough - well, teachers do have to teach, you know - And so, I think, like this year, key people from each school have gone to the technology training, rather than sending everybody. ...There's so many wonderful opportunities that we've had to take like two people this time - five people the next time, and really spread it around. And then it is their responsibility when they get back to their campus to share (Kim, university representative).

John (university representative) elaborated on the train-the-trainers model implemented for technology training:

It's an excellent concept, but we just haven't been able to get it to work. ...We've gone to principals but ...they're either not interested or they just can't give up that person.

An effective method for delivering technology training was when the SFASU-CPDT technology specialist trained the university professors, who in return trained the university students, who in return disseminated technology skills to the schools (John, university representative).

The SFASU-CPDT Fall conference, state and local conferences, summer institutes, and statewide retreats were perceived as important formal events for professional development opportunities. Myrna (university representative) summarized the various CPDT professional development efforts as follows:
The CPDT efforts are based on real needs. They are collaboratively planned with all the partners. It's a real collaboration. ...It's ongoing. It is focused on everything from individual instruction to major conferences to small groups. It is in every conceivable form from visiting programs to see what others are doing to attending national and state conferences, to having our own conferences. It's considered critical to the success of our program - to reaching our goals.

Effects. The original vision provided a focus, but the evolving nature of implementation brought revisions to the original vision that addressed autonomy of individual sites. The vision for professional development was not perceived as a “one time something that happened” (Amy, university representative). As the “gadgets” began to connect to the “purpose,” the vision became more understood and resulted in the creation of specific role definitions for participants:

The other thing, I think, is that since our roles have been defined, we’re better able to understand what it is that we are supposed to be doing or should be doing. And we’re getting better in what we’re doing (Amy, university representative).

The on-going nature of the evolving vision also provided a scaffolding for professional development follow-up. For example, as mentoring became better defined, it became a type of training that was on-going. At one particular school, the mentor teachers meet on a weekly basis and participate in study groups (Amy, university representative). Site professors are on site and offer informal on-going professional development and follow-up. Some schools have technology persons who offer on-going support (Amy, university representative).

Vision. The CEDE collaborative focused on collaboration from the very beginning of the initiative. A story told by an external facilitator at the initial vision building retreat set the stage for the collaborative’s vision:

There was a group of teachers and professors sitting around and discussing how they should begin to address the problems in their schools. How should they begin reforming today’s schools? How should they go about changing the education of today’s children? It was a difficult venture for them and no one seemed to have the answers. After a time, a wise old teacher from the back of the room stood up and said, “Well, my friends, I believe we can accomplish significant reform and restructuring in schooling and professional development. In fact, there are two ways to do it.”

“Two ways?” one young professor asked, “What are they?”

The wise teacher replied, “There is the normal way and the miraculous way.”

“Well, I want to hear about both ways,” the young professor said, “but tell us about the normal way first.”

“One day, in the brightness of midday, the sky begins to darken with clouds. The clouds are so many and so thick, it looks like night. Then, directly overhead, the clouds part ever so slightly, and a shaft of light bursts through and touches the ground. Down the shaft of light comes a band of angels who, when they touch the ground, go immediately to all the schools and universities in the area. When they arrive there, they spread their wings and, in an instant, all the schools and universities are transformed into restructured, effective, learning-centered and technologically expert places.”

The group looks at each other with total amazement in their eyes. Finally, the young professor speaks up, “Excuse me, if that is the normal way, I can’t wait to hear the miraculous way.”

“Well,” the wise old teacher said, “the miraculous way would be if we did it ourselves.”
The CEDE vision involved establishing collaborative relationships between five universities and the surrounding school districts. Collaborative processes were perceived to be the scaffolding for the entire initiative (Robert, university representative; Jill, university representative). The “driving force” underlying the purpose of their vision was to improve preservice education by providing teaming skills and technological skills for future teachers and helping them become more aware of the ethnic kaleidoscope that exists in school cultures (Robert, university representative; Lisa, university representative; and Jill, university representative).

Enactment. Initially, formal meetings were held with representatives from the five universities. “The five of us sat down together at that time, and within a month we had made a coalition” (Lisa, university representative). The next phase involved pulling partners together from the universities, schools, and education service centers:

It (collaboration) was done from the very beginning. The school districts, the principal, and the teachers were involved from the very, very beginning of the writing of the proposal, so that everyone had a stake in it to begin with. There was a commitment from everyone (Teresa, university representative).

The region Education Service Center (ESC) chose to become a partner in the CEDE consortium. Richard (ESC representative) described that it provided the ESC an opportunity to “impact technology at teacher education institutions”:

We felt that we were training teachers who were in place (in the schools), but we didn’t have our finger in the dike. We kept getting teachers out (from the universities) who had no technology experience. So when the state brought the money forward and said, “We’d like for some collaboration to happen,” and we were contacted by the universities, we jumped at the chance. I really literally put everything else on the back burner and said, “This is a chance not only to make it work, but to accelerate the process.” ...What really attracted us was the opportunity to impact technology at teacher education institutions.
So, as partners gathered, the need for *team-building* emerged:

...one of the things that I think is critical ...is the fact that we were forced to team by the situation, and we're all very good at teaching other people how to do things that we have not experienced. And so the teaming itself presented problems that are significant as far as our learning by experience how to work with people whose vision is different from ours (Lisa, university representative).

*Formal retreats* were held for vision-building purposes. One retreat was specifically held to carve out a mission statement:

And so we carved a mission statement at that time. At the end of the retreat we really came out with a very good mission and we came out with our name CEDE, which is the Center for Educational Development and Excellence. But it's also done in Spanish (Centro Educacional Para El E desarrollo Y Excelencia) and the term CEDE means to join together (Jill, university representative).

Collaboration brought people together and they began to share each others' worlds in *informal* ways. The field-based component of the initiative provided university professors more opportunity to "actually teach their courses in the schools" and interact with the school environment. The classroom teacher became more involved with the preservice student. Teresa (university representative) describes this as a "shift in responsibility":

...In other words, the teacher and the university faculty are working more closely together. They (the teachers) are responsible for part of the grading of the (university) students. They are responsible for modeling good teaching practices. So, a lot of the responsibility has shifted from the university faculty to a joint responsibility with the teacher...

...They're helping us with our preservice teachers and we're helping them with their staff development, so it's a give and take kind of thing.

*Effects.* The grant money provided opportunities for collaboration to occur. The *vision-building, team-building retreats and planning meetings* allowed people to "unite" as an "educational community" (Jill, university faculty). "Having a *common goal, a common purpose* brought us even closer together" (Ted, school representative). Dana
(ESC representative) elaborated on the “camaraderie that’s come about”, but she also felt the complexities that occurred due to the size of the collaborative were worthy of mention:

I think because of the size... and the fact that you had five distinct universities that had never really spoken to each other - and to get them married and in a happy family situation was a big thing in and of itself. And just to see the camaraderie that’s come about... Of course, some of it breaks down, but they still have a thread of it between them and that right there is a big step for them. Just the range that we had in ours and the size of our collaborative - I think we really needed more time to do it justice.

Participants, both teachers and professors, benefited from the collaborative efforts of the CEDE initiative:

I was interested in this from the start because of the collaboration among five universities. That’s really unusual, I think, for five universities to come together and come up with an idea that everybody could actually come to consensus on. That in itself was amazing. And it’s really given us the opportunity. I mean, we’re in different school districts... and its given us the opportunity to begin a professional collaboration across school district lines that would not have been. ...And this really facilitated the opportunity for us to make professional connections (Lynette, school representative).

Well, I think that the most unique thing about the collaboration... is truly how close all of the institutions and the teacher education people have become. We now know, I mean, I’m as comfortable with everybody else from the other places as I am with my own folks (Jill, university representative).

As classroom teachers become more involved with preservice teachers, they felt more professional. “Before they had seen them as guests; now they have an investment in them” (Lisa, university representative). Lynette (school representative) commented on her own experience, “And I think that’s a really neat feeling when you are a part of somebody’s professional career.”

Professors experienced increased involvement with the public school environment and had new opportunity to “observe what is happening the students and observe what is
happening with the faculty” (Lisa, university representative). They also experienced the stress involved in the added responsibilities of maintaining a collaborative relationship:

It’s just made me very tired. I think that most important is the amount of my time that this thing takes. I mean, basically I have, I suspect last year I was doing a one-half to three-quarters time job on a quarter-time release (Diane, university representative).

As far as the university faculty, the biggest thing is time here. Because we’re a small university, we have a small faculty, and trying to keep the classes going here on campus as well as being out in the schools is extremely time consuming. And there’s just not, because of the size of the university, there’s just not release time (Teresa, university representative).

Collaborative links developed across the various entities. Lynette (school representative) expressed it as “bridging the gap” between the university and the schools (Lynette, school representative). As for the universities, the process of forming the CEDE consortium led to collaborative heights never before reached among the institutions:

...The point is that the five universities had never cooperated on anything. Okay? Nothing. I mean we did it on the surface ...but there was always this underlying competition. ...Higher education is in a very competitive market. And how is private education going to compete with UTSA. UTSA is a very threatening entity to the private universities here. It’s very young. Remember, it’s only 20 years old. And so when it came to San Antonio, it cut into what everyone else had as an assured local market (Lisa, university representative).

Jill (university representative) expressed similar skepticism:

...And I think that probably from the private school perspective, my sense was that there was some skepticism about, “Oh gees, this is just the big university (UTSA) trying to call us and trying to take us over and run with it.”

Anyway, what this five university consortium did was bring us all together and we stopped being afraid of one another. And so it is the first time all five education entities shared what we were doing (Lisa, university representative).

Jill (university representative) ties the whole collaboration piece together:
Well, I think partly the uniqueness right from the beginning - and I think maybe the most *miraculous thing* is that it has survived - is the true collaboration, the true collaborativeness of this venture.

*Pattern 2. Multicultural Emphasis: Diversity is a Natural in the Content and Processes of Professional Development*

*Vision.* Addressing the needs of the San Antonio community became a critical aspect of the discussions that emerged during vision-building processes. "We're a diverse community, predominantly Hispanic" (Jill, university representative). Jill shared the content of the question that became the collaborative's focus, "What could we all do to work together to address the needs of our community and at the same time infuse and be able to use technology as we are preparing teacher?" Jill added on to that, "And, so how are we going to prepare teachers who will then go on and deal with the *changing world* and technology?"

*Enactment.* The CEDE participants were provided opportunities to attend a variety of *formal* sessions on multicultural education:

The centers across the state meet and they've had several *workshops* on multicultural education. Some of our people...like there was a workshop on multicultural education in Houston several weeks ago. And a number of our representatives went to that (Robert, university representative).

*Informal* professional development for multicultural awareness also occurs:

...Also, I would say almost all of our PDS sites are in schools that are 90% to 95% Hispanic. So, a lot of our students are getting a lot of *hands-on experience* right in the schools where they're working...

...Most of our PDS sites are in inner-city schools and a lot of them (university students) are getting experience with diversity, especially Hispanic populations. I think that the fact that they (university students) are spending more time in the schools and our faculty out in the schools are spending more time with them...
Diverse demographics of the schools also offer opportunity for university professors. Due to the increase in university student contact at PDS sites, some professors experienced increased involvement in schools:

The most important thing was that they (university faculty) would now be - the word that comes to my mind is - public. That there were no more hiding places. ...So many of them have been isolated from the community - the needs of the community - for twenty years...

...And so part of the inservice was to find ways to make opportunities for them to connect with the schools again and also to connect with those classroom teachers because many of them had taught these classroom teachers. And now the teachers - once the professors came into their area, they (classroom teachers) were able to tell them how things had changed and what was a surprise. I guess in a word it was traveling and getting input. Because this is - the university professor has not been at a cultural level which has much input from the community (Lisa, university faculty).

Effects. Diversity found in the San Antonio community made implementation of the multicultural aspects of the vision a natural evolution:

...the diversity and inclusion - you know, I had to talk about this at the state when we made our presentation. I think it's real important to understand that diversity and inclusion is so much a part of the San Antonio area that we don't even think anything about it. It's not that we ignore it. It is so much a part of every single solitary staff development, every single solitary class I teach, everything, that I was having trouble answering some of the questions. And it was really hard, and I was thinking, "Why is this so hard?" And it finally occurred to me, "This is a problem for these people. It's not a problem for us" (Lisa, university representative).

Pattern 3. Building the Listening Model: Dialogue as Professional Development

Vision. The process of breaking barriers contained in "old pedagogical delivery systems" became a part of the plan for creating field-based teacher education programs (Lisa, university representative):
It was the old pedagogical delivery system. We're going to take this out there, and we're going to show these people. We're going to bring in four experts and we're going to show these people how it's done, and then tell them they have to do it.

...The PDS model says, "My name is Lisa. I teach at the university and I would like to come and sit in your classroom and learn what you're doing."

The PDS model was built on what Lisa (university representative) calls the "listening model":

...you know, teachers have had this horrible thing - they've had 10 or 12 different things dumped on them. Everybody says, "I know how you should be doing it. Let's come out here and I'm going to show you 'way' number 13." And they just roll their eyes. That's how they feel about in-service. I know all about it. I taught English for fifteen years. I felt the same way. I always took a really good book and put it inside my manila folder and read. I mean, they were boring. They're not effective in the way that they're normally delivered. And so I think that what teachers saw was that they not only had an investment (with preservice teachers), but they had a real voice. They could be the experts and we (university faculty) could listen. And I think that's a critical part of it, and I would guess that universities and/or CPDT's which didn't build themselves on that listening model are not going to show the long-term success that the rest of us have.

The listening model provided the opportunity for dialogue and an avenue for autonomy. Each site was given the freedom of being heard and of identifying their own focus:

From the perspective of the teachers in the schools, we didn't go out and say, this is what we are going to do. We went out and had them form a community council and they talked about what some of their - what emphasis they wanted to work on. And the different schools came up with different areas of emphasis. So then, some of the inservices, some of the things they did would focus on their theme of what they were going to do (Robert, university representative).

We wanted each school to find the focus around which to build staff development efforts...We felt that the university could not do this, that the teachers and the administrators in the schools knew what the needs were and what the dreams were for a particular school (Diane, university representative).

Enactment. The first phase that emerged in implementing the "listening model" was a process for listening to each others needs. University participants attended formal faculty
meetings at the PDSs and addressed the teachers, “asking for their input on what kind of staff development they felt they needed” (Teresa, university representative). **Formal** and **informal brainstorming sessions** occurred, meaning that some were planned in advance and others “just happened when we ran into each other” (Lynette, school representative). Lynette shared that they “met a lot with the professors” and the brainstorming sessions were “very intense.” Ted (school representative) characterized the brainstorming sessions as “many” and “lengthy.”

Learning to listen also meant learning to accept individual PDS needs concerning pace and progress. Not all PDSs were ready to identify a focus. Diane (university representative) shared an example:

> In one campus in particular, I mean it was just, for the first two years we worked with that campus, it was like the teachers just couldn’t really quite make up their mind what they wanted to do. And the people who were working with them kept getting somewhat frustrated because, I don’t know, they just didn’t have much of a focus. ...But we kept working with them, and then finally this year things just kind of fell into place. ...And you know, I think they’ll continue to move fairly slowly. But that’s fine. That’s the pace at which they feel comfortable.

**Informal dialogue** increased between the participants. Teachers were perceived as involved in more dialogue with university professors. Lynette (school representative) described this dialogue as “working together, hand-in-hand in the trenches.” Vicki (school representative) described the process of working with professors as an opportunity for “professional dialogue.” One of the catalysts for the increased dialogue between professors and teachers was the preservice teachers’ presence in the schools and the joint responsibility of providing the preservice teachers with meaningful and effective experiences.
Teachers were also perceived as talking and sharing more with each other. Vicki (school representative) experienced a “broad circle of people” that provided her with a “basis for support.” Teachers learned how to “mentor” each other:

The reason I say professional development is because we learned to be mentors to each other and we learned how to be more cohesive in our planning and we got that vision down to where it’s real tight (Lynette, school representative).

The teachers also shared that a “wall had been built” (Lynette, school representative) between themselves and the uninvolved teachers in their building:

Sometimes there’s almost a little wall that starts to be built because fourth grade is always busy and doing this project. But, I don’t want to say that because that sounds a little negative, but at the same time, obviously we really do know more. CEDE has taken me from someone who didn’t even know how to turn on a computer - to doing multimedia. But, yet, the wall has been built between us. I think that if they (CEDE) were going to do something again, they need to make sure to incorporate every grade level - at least in a piece (Lynette, school representative).

University professors built new relationships and entered upon dialogue with each other:

It was really the first time that the teacher preparation program from these five universities had really gotten together. So that was a significant thing to come together and talk about how can we collaborate (Robert, university representative).

I mean, I just feel very strongly about the people I’ve gotten to know at the other institutions and I truly, you know, ...I care about them...I trust and know them...It’s like our professional relationships and personal relationships have been extremely rewarding (Jill, university representative).

Effects. The process of building a listening model not only increased listening skills between participants, but also increased dialogue. As participants, teachers and professors, entered into dialogue concerning the preparation of preservice teachers, teachers’ input was “being heard” and they were given a “voting voice” in decision-making processes (Lisa, university representative). Teachers felt empowered. Teachers
also benefited from interaction with professors. Diane shared that “teachers see that as a tremendous benefit when they get to sit down with a professor who has real expertise, who’s able to make recommendations and suggestions for materials to incorporate and so forth.” Teachers feel the professors have become professional “colleagues”:

> Now it’s like they (professors) come to us and they sit and they wait and they listen to what we’ve got to say - what do we bring to the table; what concerns do we have. And they know how to ask the right questions, too. They don’t come in with answers. They come in with questions. And it’s a very different feeling. I mean, we are co-workers. We’re colleagues (Vicki, school representative).

Teachers shared feeling less isolated:

> CEDE has really helped us open lines of communication that would have never been opened before. ...I’m no longer afraid to try a lot of things and have failure in my classroom and then come and talk to my peers about it and get ideas from them and generate my own ideas on what needs to be done in the classroom...You can listen to what other people are doing and you can incorporate into your own, whatever you’re doing (Ted, school representative).

The process of sharing dialogue between teachers and professors has paved the way for on-going staff development and follow-up activity:

> We do the inservice for the teachers, or staff development for the teachers. An then we’re there. We go back. We find out what kind of problems they’re having. We dialogue back and forth. They’re saying it’s not working, and we look at why it’s not working. ...And if there’s a problem, maybe we need to revisit what we’re doing (Teresa, university representative).

Pattern 4. Murals and Mosaics: Professional Development as Integration

Vision. “Integration” was a theme that persisted throughout the various action plans identified during vision-building processes. Specifically, integrating technology was perceived by many as a highlight (Lisa, university representative; Jill, university representative; Teresa, university representative; Robert, university representative). Lynette (school representative) stated that “the vision, to me, was to incorporate
technology in our classrooms.” The purpose of integrating technology was to better prepare teachers for a technology-rich society (Lisa, university representative).

The region Education Service Center (ESC) became involved with the technology piece of the initiative and shared their vision for integrating technology across the PDS sites and the universities:

...We were actually thinking about five-year strategies for impacting that. First, you’ve got to build the relationships, get your foot in the door, and gradually move people along. And so that was one of the areas that was really on our minds because what was happening was - we felt that we were training teachers that were in place (in the schools), but we didn’t have our finger in the dike. We kept getting teachers out (from the universities) that had no technology experience...So the vision was that we would have university faculty using technology to teach differently, to teach teachers differently so that when the interns came out into the schools as practicing teachers, that they would have, they would actually be leaders for technology use... (Richard, ESC representative).

The ESC saw their role as “building capacity and then getting out” (Richard, ESC representative).

**Enactment.** In order to build capacity, the ESC became “full blown consultants” to CEDE (Dana, ESC representative). Dana elaborated, “I never dreamed that we would play the role we played in CEDE for technology.” The ESC wrote the specs, ordered and installed the equipment for “22, 23, or maybe it is 24 video conferencing units with two-way interactive video” (Martin, ESC representative). They also installed up to “20 something” satellite down links at every school of education and at every PDS site. The ESC participants also delivered technology training.

Initially, the technology training was “canned” and delivered formally through workshops, summer institutes, and training sessions (Robert, university representative). The need for external facilitators during start-up phases was described as follows:
It's all so new that it's hard to find somebody that can come in and you can tell them what you think you need, but you need them to really verify that for you. It's like you've got to know what you don't know. And that's hard. And so it's having someone help identify that. The region service center has been very, very helpful (Jill, university representative).

Lynette (school representative) experienced similar frustration with “not knowing”:

Because how do you know to ask a question? How do you know to ask the questions if you don't know what you need. ...So, then we go out and fiddle around and find out, “Oops. We don’t know how to do this. Call Dana.”

Another arena for delivering technology training, as well as other staff development opportunities, was identified as “cross training”:

Now it (staff development) is done by university faculty. It is also done between the professional development schools. We have a technology person at one of our professional development schools that does training for other professional development schools, so it’s cross training between our PDS sites. We also bring in people to do the staff development for the teachers (Teresa, university representative).

Another model of delivery that emerged was what Lisa (university representative) entitled, “each-one, teach-one” model. She elaborated, “In other words, you train five people to do something and you send them out and give them enough confidence that can then train others.” The selection of training cadres was perceived as “necessary because we couldn’t deal with the numbers” (Lisa, university representative).

On a more informal basis, the teachers developed an attitude for integrating technology that was not dependent upon external expertise. Diane (university representative) shared that the teachers would “just jump in” and “teach the kids” and “solve problems with the kids as they went along.” A need for meaningful application appeared to be the driving force to learning how to integrate new technologies. Diane
shared the following example of how technology was integrated into a unique community research project:

One school, which is located across the street from a housing project in which 99% of the children who go to the school live in that housing project. At the ends of the buildings, two-story buildings, throughout the course are these huge murals. And the murals depict, oh, Hispanic scenes, I mean they could be historical, they could be political, they could be social, they could be religious. But there’s something like, oh, 60 of these huge murals throughout the course. The kids wanted to study them. So, you have all kinds of opportunities to integrate across the curriculum in studying the murals. So, they developed - they integrated - they pulled all the information together into these multimedia presentations. And teachers didn’t hesitate to jump in. I mean, the fact that they didn’t know how to do multimedia presentations didn’t particularly bother them (Diane, university representative).

Professional development opportunities emerged on various themes as each PDS selected its focus. As teachers, professors, and university students informally collaborated with each other to implement and integrate technology into their curriculum, they learned from each other:

And they (teachers) been energized by our (university) students. They’ve been - it’s been fun for all of us to share the learning experiences, the technology together (Jill, university representative).

I think they (teachers) are improving their teaching by helping our preservice teachers. ...I think the teachers, because they’ve got someone in the classroom watching their every move, that they reflect on what they’re doing and what worked and what didn’t - so that it won’t happen again (Teresa, university faculty).

Effects. The initial focus on technology equipment slowed down the action plans (vision) for integration (Richard, ESC representative). Purchases and installations were dependent on a limited number of support persons and took “almost two years” to complete (Richard, ESC representative). Training for the “use” of the technologies was delayed.
Even though the trainers and professional development facilitators expressed frustration with implementation progress, teacher participants experienced a variety of benefits from attending training events and "jumping in" to integrate technology into thematic units of instruction:

The technology is being used. It wasn’t just taught to us. But it is being used in the classroom now and there’s plans to use it in the future. So, it’s become just like a textbook. It’s become part of the classroom (Ted, school representative).

Being involved in a really in-depth project like the community research project and tying that into using Hyperstudio - it’s still fresh in my mind because it’s something I really enjoyed and I can see how it can help our students - even later on in life. They’ll probably never forget this research project - I sure won’t (Ted, school representative).

Lynette (school representative) expressed a feeling of empowerment:

I think overall to me as a professional looking at professional development, even though they (professors, ESC trainers) are training us in areas - they also treat us as experts in areas to where they meet us on an equal basis.

The process of delivering professional development opportunities, especially in regard to technology training, was affected by a variety of interfering factors:

The biggest obstacle in professional development for the university faculty and the classroom teacher, not for the preservice teachers, has been the technology. Because it is the most difficult to schedule. Not because people can’t learn. It is the scheduling. So, the culture of the university and the culture of the schools, the time, the people, the rules, di-di-di-di-di, are absolutely a brick wall against which somebody has to just bore through in order to set up technology staff development (Lisa, university representative).

Such scheduling problems interfered with implementing the “each-one, teach-one” model. “Pulling teachers” from the classrooms and finding time to train them was perceived as difficult:

You know, the fact of the matter is they (teachers) have other pulls on their time. The fact of the matter is the San Antonio Independent School District says you have
to close the schools a four o'clock in the afternoon, you know. I mean, I felt like trying to get into some of the small churches in Italy, and the key is that you have to find the guy with the key. ...So, there's all sorts of - the culture of the school does not lend itself easily to that (Lisa, university representative).

I think we suffered from typical training of trainers disadvantages. ...between the time we planned the training of trainers and we implemented it, it turned completely around where you wouldn't let a teacher out of class time come hell or high water. ...another thing that happened to us in reality was at the school sites and the university sites they picked the people that were the most active and on the cutting edge and most busy. And they sent them to be trainers. And, so when we trained them, even the ones that survived the whole thing and did super well, they went back, and they had more duties than they could ever think about doing and nobody was about to release them to train (Richard, ESC representative).

Another effect on delivering professional development was discovered when a group of teachers and professors implemented the community research project that integrated technology:

...I realized what you really have to do if you want these people to use the darn technology - it has to be integrated into something that's already meaningful to them.

...I think the point I am trying to make is that we only got somewhere with technology when we were really concerned with something else (Diane, university representative).

Panhandle South Plains Center for Professional Development and Technology

Pattern 1. Understanding Each Other: Attenuated Collaboration

Vision. The PSP-CPDT was founded on the joining of four universities, two region service centers, and 15 school districts. The vision was to build communication between the entities and "get the people to dialogue more from all the different levels" (Kurt, university representative). Planning processes for creating the PSP-CPDT were initiated through a series of vision-building meetings. Connie (school representative) recalls the unfolding of the initial vision as "a huge process." "We had representatives from service
Enactment. Collaborative efforts were initiated through decisions made by formal committees including a 40 member governing board, a 20 member steering committee, and various design teams (Carla, university representative). The governance structure of each decision making group was carefully planned to include representatives from each entity. "We've tried to be true to the fact that we needed to have representation from all those different groups" (Renae, university representative).

Informal collaborative processes unfolded. Public school and university people began interacting and learning how to "play with each other" (Nancy, school representative):

University and school collaboration was a real political investigation. We didn't know where everyone stood - who was involved in what. We had four very different universities, two very different service centers, and then all these school districts trying to pull together. And as you know, we each think our way is best. Well, it took some time to learn how to play with each other and after quite a bit of effort, we came up with a common goal - good teacher education and make better teachers out of our preservice folks (Nancy, school representative).

University faculty and classroom teachers began sharing space and planning together:

The university faculty are teaching classes on those public school campuses. The preservice students are actually attending class there. The university faculty are working directly with the faculty on those PDS campuses to provide additional staff development. They are working with them on research projects. They are developing courses which are being taught on those campuses at the request of the faculty on those campuses (Carla, university representative).

Effects. The vision of creating collaborative relationships between entities came to fruition for the partners in the PSP-CPDT. Through increased dialogue and collaborative planning, the universities had developed an "appreciation for each other's uniqueness" and were perceived as understanding each other "for the first time" (Renae, university representative).
representative). Carla (university representative) elaborated on the understanding that had developed between universities:

We've come a long way in people understanding that students choose to go to Lubbock Christian or Weylin Baptist or West Texas A&M or Texas Tech for reasons that are pretty independent of the quality of the program. And that's okay. Lubbock Christian attracts a more cosmopolitan student from Churches of Christ around the state. Weylin Baptist attracts farm children from strict Baptist families. West Texas A&M attracts students who want to go to a large university but are pretty much small town students. Eighty percent of the students at West Texas A&M stay in that area to teach. So it's truly a regional university. Texas Tech attracts students from all over the country. And the greatest thing we (PSP-CPDT collaborative) probably have done is get them all to respect that in each other.

Increased dialogue also emerged between the universities and the public schools:

Well, what I see that's different is that it's not just the universities making decisions and the public accepting them again. We're seeing public schools and universities planning together and the universities are finally more responsive to the real needs of the public schools rather than just telling them what they need (Renae, university representative).

All partners, including university, public school, and service center participants were perceived as “really working together” in developing a common language and a common mission (Renae, university representative). However, communication of this mission was reported as not successfully reaching all levels of participants once implementation was initiated. Jennifer (school representative) shared that the preservice mentors were “confused about what their roles were.” Chris (school representative) stated, “I didn’t have a clue then and I don’t have a clue now as to what this whole thing is about.” Nancy (school representative) perceived the problem to exist because the mentor teachers did not “understand the mission.”

One interfering factor in successfully communicating the PSP-CPDT mission was due to the size of the collaborative. Trying to communicate between 4 universities, 2 region
service centers, and 66 schools from 15 ISDs that cover a geographical area of 40,000 square miles, was perceived as a "challenge" (Gina, school representative). Carla (university representative) stated, "The reality to the whole thing is that 66 is too many."

Another issue that was perceived to interfere with communication during the initial phases of implementation, centered around PSP-CPDT leadership issues:

It took...our professional development center didn’t really do anything, from my perception, the entire first year it was formed. We had a different director and that person didn’t work well. And there was a lot of problems. And when our new director took over, it took her, I don’t know, four to six months to try to clean up and get people speaking to each other again - just trying to say this is the vision of the center and this is possible. So, we kind of got off to a bad start (Connie, school representative).

It was difficult finding a leader that everyone could respond to - one that wasn’t playing favorites or something like that. ...from my perspective, when we changed directors, things improved a great deal. But then we’d already made some decisions that were hard to undo. ...And so I think that one of the main lessons I learned is that the leader needs to truly have everybody’s best interest in mind, and not just one group or try to please a group. And not be afraid to say “no” to somebody. I think our vision has become more stable with our new director (Kurt, university faculty).

Despite difficulties with the communication chain, respondents described how barriers were broken between four universities and between each of these universities and the public schools. The bond that emerged between participants provided an avenue for professional development opportunities. As the participants increased their level of dialogue and involvement with each other, they learned from each other:

Well, I think the perception by the public school people is that we really mean business, and that we’re not in it just for the short-term trip - that we’re really committed to what’s happening in the public schools. I don’t think they believed that at first. I think we have learned to communicate with each other (Renae, university representative).

I think the neatest thing is to go to meetings or go places and have the K-12 people walk up to me or come up to my department head in my department and talk to the
university folks as a colleague. It's more of - "We're in this together" - for the people who've really been involved at all stages. We know each other. We work well together. ...And even just the people in the departments of ed. at the four universities are now really good friends and work well together. And so I think that's been important for my professional growth because I feel like all those people are resource people now (Gina, university faculty).

Well, if we're looking at the vision, if the original vision was to build camaraderie between the individuals, I have five or six people now that I can call when I run into trouble that I didn't have before. So, as far as my personal networking, it's been invaluable for that (Rosemarie, school representative).

University professors developed more respect for the classroom teacher (Carla, university representative). The classroom teacher gained more respect for the university professor (Kurt, university representative):

And I noticed that the public school people seemed to generate a lot more respect for the colleges and their preparation...because they know that we've been in the schools and we go in the schools and that we know what they're facing (Kurt, university faculty).

Collaboration between entities and the increased dialogue between participants was perceived as the thread that holds the initiative together:

One thing that I think is unique about our Center is that it's really a collaborative. And I think if there's anything that's come out of this whole process, it's that one thing. We are working together (Renae, university representative).

Pattern 2. Visions: Fields of Dreams and Tech Toys; New Professional Educators

Vision. Technology was one of the main components in the Panhandle South Plains Center for Professional Development and Technology (PSP-CPDT). Renae (university representative) described, "Our mission was to improve teacher education, professional education, through the use of clinical experiences, primarily field-based courses and the infusion of technology throughout the curriculum." She added that "technology was primary for us." Dawn (school representative) described their vision as "promoting the
development of really professional - new professional educators, and also to bring us to the forefront in technology." Kurt (university representative) perceived the vision to have three main purposes: (a) \textit{preservice education}, (b) \textit{professional development}, and (c) \textit{technology}. Nancy (school representative) was more focused on technology and the classroom teachers. She perceived the vision as "providing inservice teachers with technology tools to prepare them for 21st century schools." \textit{Technology highlights} prevailed as a pattern shared by all respondents.

One main focus in the technology vision was to build an interactive network across the various entities of the PSP-CPDT:

\begin{quote}
We had envisioned sort of an interactive network...eight sites that are on an interactive network and hooked together with one line. ...our hope had been that beyond that - that we would be able to say, maybe through our own connection to TENET, that all of the school districts could connect into the professional development center because we would be providing equipment and whatever might be needed. ...There would be like a South Plains center that all schools could have access to (Connie, school representative).
\end{quote}

As part of the interactive network vision, "two technology demonstration sites" were selected with the "hope" that the PSP-CPDT would be able to facilitate in developing them into "high tech" sites, as well as facilitate in training the teachers (Connie, school representative). The university professors were envisioned to take the lead in developing and implementing a technology training plan that supported the process for creating Constructivist classroom environments (Connie, school representative):

\begin{quote}
We are trying to help teachers see how to incorporate technology into their instruction and into their classroom so that what the student experiences is more of a Constructivist model of the classroom and less of the teacher-led, teacher-do, teacher-fails kind of a classroom.
\end{quote}
The technology vision became an initial source of motivation for participant involvement in the initiative:

I think the technology aspect kind of got everything started. We felt that one of the reasons we got the grant was because of the technology component in it. We felt we needed to make fine use of it - or lose it. So, we felt we needed to make that a key issue. You know, people are fascinated by it - it's a new avenue and sparks a lot of interest (Nancy, school representative).

Network equipment was installed to connect the four universities, two demonstration sites, and the two education service centers (ESCs) with an interactive network hooked together with one line. Along with the eight sites installed with interactive video, data links were extended to all 66 schools (Connie, school representative). Schools were selected for data links in conjunction with where the universities currently placed student teachers. Twenty-two of the 66 schools were considered to be PDSs. The remain 44 were additional schools where the four partner universities were placing student teachers. Each of the 66 schools received a computer and a modem for a data link (Carla, university representative).

Another component of the PSP-CPDT's vision was to "promote the development of new professional educators" (Dawn, school representative). "Clinical experiences" and "field-based courses" were envisioned as one avenue for improving teacher education (Renae, university representative). Field-based experiences were predicted to effect professional development and growth at all levels: preservice, inservice, and university faculty. Renae (university representative) shared her perception of the "ideal" classroom teacher and university participant as follows:
We saw the ideal classroom teacher as one who was committed to children, who was committed to life-long learning, and who was willing to change methodology, techniques, whatever, to met the needs of the twenty-first century schools.

...We felt that the university people had to be part of that, and that the partnership between the university and the public schools would have to strengthen. We could not each do our own thing and only met at the student teaching experience to be effective. And we recognized that probably in many cases, the public school teacher might be a little bit further along than some of the university people. And I think that was probably a true assumption in some cases.

...As for preservice, of course, we hoped that they would be involved in anything that was on site.

"Mentoring" was a theme that emerged early in the initiative (Renae, university representative). Carla (university representative) described the vision for "mentoring" as follows:

And it was our hope that those mentors would work with, well the preservice mentors would work with the other classroom teacher on their campus and with the preservice students to bridge the gap from the college culture to the public school culture. That the preservice mentor would be an additional contact, would help provide training for the supervising teachers, or cooperative teachers, or whatever you call them on the public school campus, and help them be better resources for the preservice students who are in their classrooms.

**Pattern 3. Patterns of Professional Development: Camps and Mentors**

*Enactment.* A variety of staff development opportunities were *offered to all* participants. Inservice and preservice teachers and the "entire education faculty" were invited to participate in *formal* events, such as "Teacher Camp" and various *inservices, workshops, and conferences* (Gina, university representative). "Teacher Camp" was the event most emphasized. "Teacher Camp" was sponsored by the region ESC and involved PSP-CPDT participants (Carla, university representative). Kurt (university representative) provided details of "Teacher Camp" as follows:
One of things I thought was really neat and clever is a Teacher Camp that grew out of this project. One of the members of the service centers came up with the concept and she involved all the people from all the schools. She found a campus down in Junction, Texas...And what she did was she took all these components that we've talked about, put them into workshops, got their presenters gathered up, used the dormitories down there (in Junction) and their classroom facilities, gathered up computers, gathered up phone lines, went down there, and she pulled off these workshops in a summer camp setting where we had workshops during the day and then there were also activities that teachers did - like canoeing, hiking, - they played cards into the night. You can imagine. So the atmosphere was just really tremendous and made everybody feel just so much better about what they were doing (Kurt, university faculty).

Kurt (university representative) stated, “we had people up and down the line” involved in staff development opportunities. Shared staff development was described:

I think maybe the unique piece has been the cooperation among the universities in providing staff development. ...Traditionally, any planning that has been done has pretty much been one person doing the planning. And in the past year or so we’ve seen that change to universities working together to provide the training to public schools. We have a preservice mentoring model that has been developed and delivered by a faculty member...with assistance from a classroom teacher. So that, to me, is the unique thing that we’ve done out here - we’ve broken down some barriers between universities who traditionally have done things on their own (Carla, university representative).

Internal experts including ESC representatives and select university faculty, as well as external experts, provided numerous training opportunities (Gina, university representative, Nancy, school representative). They trained cadres of technology and preservice mentors with the intent of building internal capacity through a train-the-trainers method of delivery. Each technology and preservice mentor was assigned the task of returning to their respective campus to train internally. For example, a cadre of technology mentors, representing each of the 66 school sites, was organized to deliver technology training. The intent was to build internal capacity by training a technology mentor on each campus and that person would become an “advocate for technology on
their campus and kind of keep in touch” (Gina, university representative). Gina shared that because the PSP-CPDT was so “huge”, it was difficult for the few available experts “to be every place all the time.” Therefore, they were depending on the technology mentors to go back and do the training with the teachers on their campus.

Various technology opportunities were provided. Due to the data links installed to all the school sites, TENET training was emphasized (Gina, university representative). “We have also done considerable training in distance learning, teaching on television, and that sort of thing” (Renae, university representative). The concept of teaching on television led to opportunities for delivering professional development opportunities via cable television networks:

...we put together a staff development workshop and delivered it over the cable television station that the school district operates. And the local cable company puts that out on one of the cable channels. And this summer we delivered staff development over cable TV into the homes of teachers and anybody else in the community that wanted to watch (Kurt, university representative).

The video staff development workshop had three strands including telecommunications with TENET, wordprocessing with ClarisWorks, and authoring software with HyperStudio (Kurt, university representative).

Informal professional development emerged through interactive experiences between participants. For example, some teachers became motivated to participate in technology opportunities simply by observing and interacting with another teacher implementing some new strategy:

One man has brought technology projects into his entire grade level. ...teachers are noticing and saying, “Look what he’s doing. I want to do that. That looks like fun” (Nancy, school representative).
Connie (school representative) described that the teachers learned technology innovations from watching each other, especially when the teacher “being watched” was not considered to be a “computer person”:

...when somebody else comes back that they didn’t think of as a computer user, then it’s like, “Well hey, if she can do it, I guess I can, too” (Connie, school representative).

A similar scenario was shared in regard to university faculty:

Well, I think there’s a lot more awareness of technology and what is available, and also, I think a little bit of peer pressure to get in there and start doing something has occurred. Because the university faculty that are involved through our field-basing in public school campuses are seeing fourth grade teachers using video discs and are saying, “Maybe we need to be doing some of that, too.” (Gina, university faculty).

Interactive experiences between mentor teachers and preservice teachers also was described as providing professional development opportunity. Dawn (school representative) shared that mentor teachers experienced personal professional growth from their working relationship with the preservice teachers:

That’s one of the greatest things, I think - as we reflect on our own teaching in order to explain it better to an observer, or to make certain the observer understands what we’re trying to do. I think in the end we become better teachers. I really do.

*Pattern 4. Professional Development Opportunities: Results and Effects*

*Effects.* The technology aspect of the vision led the PSP-CPDT immediately down the path of purchasing and implementing technology equipment. The process of *installing and linking the 66 schools drew much attention* and resulted in *delaying the application* envisioned for the technologies:

...they were trying to spread this data link network and how they did it, they expanded it to 66 schools. They should have just stayed with the professional development schools. It would have been much more manageable, because in Lubbock alone - well, you can’t make an impact on the 33 schools just in Lubbock ISD in two years.
Physically you can't. And then, what about the other 33 that stretch all over the Panhandle (Carla, university representative).

Talk about lessons learned. Like our video conferencing system. I think we made a lot of decisions, like, "Let's put all this equipment in place," and we worried so much on making it work and the physical component that when it did finally start working, we kind of looked around like, "Now, what are we going to do with it?" And so in some ways we let the technology drive us more than we did the outcome or the performance that we were hoping or the gain or whatever we were going to get from it (Kurt, university representative).

I think as a lot of us have been maybe swayed by the attraction of the big toys called technology. I think that steered us more than it should have. Just getting our hands on the toys provided by this grant and then figuring out what to do with them, as opposed to figuring out what to do and then go get the toys (Gina, university representative).

The ever-changing nature of technology also caused ongoing complications in implementing the vision. "...the technology, of course, always gets ahead of our plans" (Nancy, school representative).

PSP-CPDT participants shared a variety of benefits that they perceived to be a result of technology implementation. Dawn (school representative) described the following experiences:

The center offered all mentors, technology and preservice mentors, a university class on technology. It was wonderful, because it opened doors to me I didn't even know existed. I had a typewriter mentality with my computer...but this class was taught between two university campuses and there was interactive video... Because of that, I mentored a student teacher at another university campus - online...

...It also benefited my eighth graders, because while I was traveling through Internet, which this class had taught me to do, I found an offer about multicultural cookbooks that students could participate in. And so my students, all 108 of them, went to their families of very many different cultural backgrounds, and discussed...about a recipe that had come down through their families... They had to write a little three or four line explanation of why this recipe was important to the family and it had to reflect their culture. And we sent those on-line to California and they were published by an adult high school. And that could not have happened without my training opportunities.
Connie (school representative) summarizes that overall, she believes that “more (school) people are using technology to impact their instruction” as a result of the PSP-CPDT efforts.

The new technologies had varying degrees of impact on university participants. Kurt (university represented) felt that the gain in new technology at the university level was a “big plus” and was helping prepare better students by providing them with “tools in their hands that they can use.” Nancy (school representative) felt that university professors had “really come along - not in big groups, but at least more than before.” Some of them had presented at “Teacher Camp.” Others had requested individual assistance for particular software applications. Nancy further elaborated, “It’s not a lot of them, but where there is nothing, a little bit of growth is a good step”:

We’ve provided staff development courses for university faculty -like the one we were teaching over LISD TV- we have 30 faculty members from Lubbock Christian enrolled in that course. We provided one-to-one training in the use of TENET and e-mail. One-to-one is more successful than groups with university folks. But, there really is this attitude - particularly at the research universities. It’s just simply not their priority. They’re quite busy enough teaching their three classes and doing their research. And add to that, the young faculty members, they’re quite busy enough trying to get tenure (Carla, university representative).

Part of the vision was that the university faculty would take the lead and help develop some of the technology instruction. “In practicality, that hasn’t happened” (Connie, school representative).

On-going follow-up processes were reported to emerge from the implementation of the technology vision. For example, providing staff development opportunities via cable television made it possible to videotape sessions and provide the following benefits:
Being able to rewind the tapes and review has been a real positive method of follow-up and what's really neat is that even though our target audience is teachers at home in the summer, anybody that has cable TV can get access - even parents (Kurt, university representative).

...I don't know how many people who recorded the two hours and went back and said things like, "I didn't think I'd ever learn how to download, and I had to watch that tape three times, but now I can download." It's a permanent record that they can go back and look at over and over again (Connie, school representative).

Electronic mail provided another avenue for on-going support. "Most of our campers ended up with electronic mail addresses the first two years and we kept dialogue with them" (Nancy, school representative).

The amount of follow-up and mentoring provided by implementing the train-the-trainers model was not as pervasive as envisioned. For example, follow-up provided by the technology mentors was perceived as limited:

...It's (the follow-up from the technology mentors) not happening. It's pretty much whatever happens in that school. And we've not really followed up on that probably as much as we need to. But, again the size and the numbers of this collaborative tend to make that a tedious kind of situation. ...I don't really know how pervasive the training follow-up really is. I know of real pockets of success, and those are the ones we tend to say, "Look what so and so did! It's so good!" But no, I would have to say no, we don't know how pervasive this has been (Gina, university representative).

There's still some problems with the technology mentor issue. Part of that initially happened the very first year when the center was trying to get off it's feet, only it wasn't getting of it's feet. Some letters went out to the principals to select a technology mentor, but there was no criteria put on them for that person. So, some of the principals selected computer people, and some principals just selected somebody. ...I still think there's not a real clear job description for that person (Connie, school representative).

...the hope was that they (technology mentors) would go back to their schools and extend that training to their faculty. But because, and this is opinion somewhat, but it's not off the wall...because we had no real tie to them, and because they were just political decisions, they didn't feel any real need to go back and do anything (Carla, university representative).
Follow-up provided by preservice mentors also was perceived as limited:

Well, the first year, I think all of us 66 mentors went for training. The next summer we had dwindled considerably for training. So, I can only assume that it was not implemented after that first year. And now there has been some talk that perhaps it isn’t being implemented as it should in many of those 66 schools. And part of that, each school is unique and perhaps the administration of that school doesn’t want to turn loose of control of dealing with student teachers and observers and that sort of thing. Or perhaps it’s a mentor who isn’t that committed to the process for whatever reason. Now there’s some who are really into it heavily (Dawn, preservice mentor).

However, *site specific* examples indicate *pockets of success* where technology training and mentoring were implemented. For example:

One of our technology mentors at a school in Plainview which works with one of our partner universities, brought six of her teachers to Teacher Camp. And they have all gone back and trained people in their building. And now that school is going to be known as the technology school in their district (Gina, university representative).

Well, like I said, I think at some campuses, I think it’s (preservice mentoring implementation) doing very well, and others, well, it depends on campus leadership to tell you the truth. For example, one of the ladies who was the practitioner of the year last year at the spring conference is one of our preservice mentors, and she’s also part of the training team. And in her school anything that has to do with preservice mentors, she does it. She places them in classrooms. She arranges for the classrooms. She visits with each one of them. She looks at the schedules. The principal has nothing to do with preservice. But in other schools, they may appoint someone; they go to training, but the principal still does it all. So like so many things, it comes back down to that building (Renae, university representative).

Teacher participants were effected the most by the various pockets of success described by the respondents. Dawn (school representative) described preservice mentoring opportunities as “broadening the horizons” for teachers. Dawn felt that teachers not only learned mentoring skills, but they also experienced an increased “investment” in preservice education. *Teacher empowerment* was described as another effect:
I think the major impact is that the teachers are seeing themselves as more empowered and more professional, because in their classroom or on their campus, they have university faculty asking, “What do you want? What do you need? Let’s work together.” And they are having the opportunity for graduate degrees. They are having the opportunity for professional growth, not just classes - they are writing articles with university faculty members. They’re being given opportunities to be more professional (Carla, university representative).

They see themselves as a leader, a professional, someone that has experience and ability that’s valuable (Gina, university representative).

I think seeing the preservice teacher and the college teacher on campus has been very effective. And to be able to use that classroom teacher as an instructor... I think that has lifted them (classroom teachers) up professionally to know that they had something valuable to say to college classes (Renae, university representative).

I felt like I was being treated professionally and that the money - they (the university) weren’t afraid to spend the money on us (Rebecca, school representative).

Northeast Texas Center for Professional Development and Technology

Pattern 1. Learning to Live Together - and with Ourselves: Growing Together - Individually

Vision. A small group of people crystallized the kernel of the vision for the NET-CPDT. “It really started with four or five people who had, -who really, truly were trying to think way out in front and not feeling locked into what’s happening and what is” (Frank, university representative). The content of the vision focused on the notion of all partners growing together professionally:

Well, I think the big, the biggest picture was the realization on the part of a few of us in the initial stages, that in order for us to grow professionally, we were going to have to do it together. That, no matter what partner you looked at - at the teacher, the administrator, the faculty member, the university student - that the professional growth was going on kind of in isolation. So each partner had its own version of it, its own vision - if there was a vision - in terms of professional development. And we saw, we felt at least, that if we’re not careful, professional development would be going different directions - that we would become counter productive - which is really what we saw happening at the university, the public schools - all looking at the same child, but probably different perspectives, and becoming competitive. So that, you
know, the university people were sort of throwing stones and saying that "You’re not doing it right, you’re not doing it according to research, you’re not growing professionally as teacher." The teachers were saying, "What they’re telling you here at the university isn’t what’s real," and all that kind of stuff (Frank, university representative).

Frank (university representative) further expressed that all partners perceived the end product to be public school children and "what we would love for them to be able to do.”

The vision of improving public school children’s experiences was extended by asking the question, “Okay, how are we all going to have to grow professionally for that to happen?”

In order to grow together professionally, the initial visionaries predicated that the process of collaborating between entities would be the initial focus of NET-CPDT.

“What we predicted was that the first thing that would happen in professional development is that we would be very preoccupied with living together” (Frank, university representative). Consequently, the visionaries decided that they would not make any expectation in terms of curricular or instructional innovation until they learned how to work together in a common learning community. They projected a five year plan for implementation:

...So, we decided that our first year should be primarily team-building, mentoring, training, teaching interns how to be professional in school, ...and (university) faculty would back off in terms of - well, they would basically honor schools instead of being critical of them. That we would have to start by stopping the stone throwing and learn how to live together in the community out there. That was our number one - that was the vision for year number one...

...Then we decided that we would - over a five year period - our vision would begin to move into things like teacher self-improvement. So we would move into teachers setting goals for their own classroom, and that the staff development would be driven by those needs. ...Ultimately, we would begin to get into what I consider to be programmatic explorations. You know, like, “Are we doing better jobs of teaching reading - math - or science?” or, “Okay, now we’re doing a better job of using technology.”
...Now, maybe in year three we would begin to look at real innovation like integrated curriculum. Like whole language, for an example. Like integrating math and science. Which, by the way, we were not seeing very much of - if any. And then in year four, we would begin to really work together to implement those things. And year five, we would really get into program evaluation and that sort of thing (Frank, university representative).

Enactment. Formal vision building sessions were held for bringing the kernel of the vision to fruition. The events were inclusionary and “everybody was always brought to the table and invited ... to be a part of all conversation” (Carol, university representative).

All stakeholders, public school, university, Region Service Center, and business people, participated in the “System’s Framework” process, which involved “brainstorming all the possibilities for the ideal” and “identifying barriers” (Carol, university representative).

Deborah (university representative) elaborated that the vision building retreats also served a purpose for bringing all parties together, including some university participants who were angry about how the initiative was unfolding.

Another formal event involved the process of gaining voluntary support from public school and university individuals. Public school “buy-in” unfolded as “two or three visionaries,” such as a “university faculty member, the district superintendent, or some leader in the school, would go into a campus where they were invited to talk about the vision” and ask the following questions (Frank, university representative):

“What would you think if we could do this? If we could become a school where we’re all working together in the same facility?” And we would kind of, you know, raise that question and then interact. And then we would sort of leave and say, “If this is something that you really want to do, you guys get together as a faculty in the ISD, and you decide if this something you want to participate in.”
The vision demanded a high level of commitment by the majority of participants on a campus in order for that site to be identified as a Professional Development School (PDS).

Similar voluntary commitment also was expected of university faculty:

"Uh, - I think the way, the way it was presented to them (university faculty) was very much done in the same way it was for the public school people. "Are you really interested in participating in this, in this vision of future training?"

...So, that’s how it got started. But what we were - in our vision, our original vision - we wanted faculty who were interested in doing this on a volunteer basis and we didn’t want people who felt, uh... sort of cajoled into this. We wanted them to want to do this because it was going to change the faculty role tremendously (Frank, university representative).

Effects. Vision building processes resulted in structuring the initiative in terms of "common ground, equal ground for all partners" (Kathleen, school representative).

Kathleen elaborated:

The vision was really connected with “let’s make the mentor teachers, let’s make the interns and residents feel like, and faculty and principals and superintendents, feel they are a team. Let’s get away from ...levels of administration. Like teachers are so used to thinking of not having power, let them empower all members so that we come together as partners.

Traditional barriers that existed between schools and universities were diminished through vision building processes:

...Their (university’s) relationship with the school districts is now - well, there’s a trusting. That trust had to be built between the university and the districts. That was a big part of this whole thing. We (university) weren’t going in there to change mentor teachers and to say, “You’re doing it wrong” (Deborah, university faculty).

Traditional barriers within the university system also were perceived to diminish, but not without challenge:

In the beginning, there were only a few faculty members working with our program. There was still the demarcation between the traditional student teaching program - between the faculty members who taught courses on campus and faculty members
who taught field-based courses and worked in the field. So, there was a definite
demarcation and separation. And also, the secondary program was not in with the
CPDT (Deborah, university).

Their (secondary) vision was totally different. And I think that they knew what the
elementary vision was, and their attitude was, “Well, that’s fine for elementary.” ...Ya,
we’re talking locker room conversation, dinner conversations. Whenever it was
brought up you could feel there was tension mounting. Were two visions going to be
allowed to continue, or were they going to be forced to merge into one? This was
long before implementation ever happened (Kathleen, school representative).

I do see the collaboration between the departments now because there’s more
confidence that number one, they have a better idea of where they’re going and what
they want the end product to be (Deborah, university faculty).

The vision of creating participant “buy-in” was considered critical to successful
implementation of the NET-CPDT. Frank (university representative) felt that the vision
was “strengthened in that we’re finding it even more and more important to go to schools
that definitely want us - where there is a high level of commitment.” Kathleen (school
representative) believed that levels of commitment and buy-in were nurtured after the first
group of university students graduated:

The level of our graduates was so high, so sophisticated, so superior. ...the people
involved in the program were seeing a product so superior and they started saying,
“We did this.” I mean, this is a direct result of the program. And so with that
confidence and ability, people began saying, “My program.” And I believe if the
students hadn’t been superior, if they’d just been equal to student teachers from
traditional programs, it would have collapsed.

University “buy-in” on a “voluntary basis” also was emphasized in the vision and unfolded
as follows:

Well, we only got a few takers, I mean - the first semester we had one, then it went to
two. And a few more people began to get interested. And what I have found is that
as long as you have volunteers, they really can carry out that vision. When you start
assigning, which we have now had to do, then... it changes - changes the whole
picture (Frank, university representative).
The vision building processes also resulted in conceptualizing the “ideal” for all participants, preservice teachers, inservice teachers, administrators, and university faculty. Participation in the initiative was described as an opportunity to grow together, as well as individually (Frank, university representative):

...we believed that the responsibility for professional growth is really the individual’s responsibility. That, - so therefore, we have to get all of our participants getting into a reflective mode of what they know, what they would like to be able to know or do, and how could they get there. So - and we felt like the professional development aspect was the most important ultimately, ultimately the most important piece for faculty in terms of residence, mentor teachers, and leadership. And so we began to think, “Okay, we’ve got to develop a thinking, a question-raising, reflective kind of professional educator.” We’ve got to do that by sitting around talking, figuring out ways of, you know, telling ourselves as opposed to being told.

According to Frank (university representative), the preservice teacher was perceived as having a “better picture” of what really happens in the classroom, therefore providing them with a “better start up” for a successful first year of teaching. The preservice teacher also would have a better understanding of the “differences between current practice and theory.”

The ideal mentor teacher was described as:

Becoming more of a reflective practitioner and a thinker, open to questions, open to visitors, interested in working with other adults, sharing what they felt about what they do and giving other people opportunities to kind of come and, and become a partner with them, kind of breaking the notion that, “I’m all by myself in this room and I can close my door.” You know, it was much more to do with interpersonal skills, interest in the challenge to “be”, I guess to grow professionally themselves, and to assist somebody else as well (Frank, university representative).

The ideal for university faculty was to “update, improve, and expand” their view of current practice in the field and to “extend themselves in terms of acknowledging colleagues on an equal basis” (Carol, university representative). Frank (university
representative) perceived the “ideal” for university faculty to involve “major” role changes:

...major role changes included, in fact a re-look at modern-day classrooms was going to be a culture shock to the university professors who really had been talking education, but hadn’t really seen it. And so that was going to be sort of a revolution to open up the minds of faculty to recognize that teaching in schools is a very tough, tough job. Another role change was that they were going to have to give up, or at least put on the table, everything they believed was important in terms of their content because they - we were going to have to be willing to examine everything that we teach and be able to answer questions like, “Is this content relevant, is it valid, is it appropriate to deliver in this kind of program?”

The collaborative process was envisioned for “university professors and teachers to focus together and to begin to rely on each other more as resources and as experts in their areas” (Carol, university representative). Concerns for institutionalizing this collaborative process were expressed:

I do have some fears for the future. ...I see the reluctance of the (university) faculty to be willing to put out the effort that it takes, I mean no one knows any better than you and me, the effort that it takes. And as long as faculty members, the old faculty members are going to be assigned, as they are now having to do at East Texas, there’s some real danger of sabotage. And I’m already seeing it, faculty members who are determined it won’t work, don’t like it, didn’t like it, never volunteered to begin with, fought it from the beginning - who are now expected to participate. And I call them reluctant participants. I do fear that they will not be successful in the schools (Frank, university representative).

Institutionalizing also means expansion. Larry (university faculty) shared that at the time of the interview, the NET-CPDT network was “getting so big that we’re splitting apart.” Just in one school district, the NET-CPDT had 86 interns and 31 residents currently field-based and the upcoming semester would expand to 86 residents and 51 interns. Due to such expansion, quality control concerns were shared. Kathleen (school representative) summarized the issue of quality control as follows:
We need to protect the quality of the program. ...If you want people to respect education, they have to see quality. And what they see right now is we’re still doing the Target, Walmart, Kmart quantity thing. ...We ought to be the front leaders in being able to say that we’re going to protect it so that means we’re going to have to have more money. If we don’t have the money then we’re going to have to say to students, “I cannot put you in this program. You’re going to have to go on a waiting list or another university.” You’ve got to draw a line.

**Pattern 2. Formal and Informal Opportunities: Global and Site-Based Needs, “The Power of Interaction, Reflection, and Metacognition**

**Vision.** As the NET-CPDT began to expand into implementation phases, vision building processes for professional development opportunities began to surface at each PDS site. Carol (university representative) described a global focus as “things we agree in general on across the collaborative.” Then she defined a site level focus as “specific, particular needs.” Kathleen (school representative) elaborated:

I think the general vision is there - at every place. I believe, though, that the project has built into the vision - sound reasoning. “This is our vision. You take your campus, your students, your mentors, and you modify it to meet your needs. Site specific needs became an avenue for creating site autonomy, supporting the notion of growing together as well as individually.

The content of site specific needs varied. As Deborah (university representative) stated, “There is nobody on the exact same page in this program.” For example, Tracy (school representative) shared that her school had spent time on cooperative learning, portfolio assessment, and time management. Alyson (school representative) shared that her school focused on technology and team-building. Mentoring strategies were perceived as a global need across all PDSs (Kathleen, school representative).

**Enactment.** The process of implementing the various global and site specific needs occurred through a variety of formal and informal methods. Formal inservice training
sessions and workshop opportunities were offered on a “strictly voluntary” basis (Tracy, school representative). University faculty members who had volunteered to become involved in the program, participated in staff development along with the teachers (Frank, university representative):

The volunteer faculty members also began attending staff development with ISD teachers, as you might expect. They got more interested in the technology. They began using it a little more. ...They went through - some of them went through Dupont training, some of them went through TQM training, you know. And so they began to see that the ISDs, at least in our case, the ISDs have some pretty valuable staff development programs that they could access free.

Outside trainers were hired to deliver inservice training sessions and workshops:

You had outside trainers who came in to deal with instructional issues. For example, with mentoring, the main focus was on interpersonal skills and adult learners (Kathleen, school representative).

I did go to one summer workshop, summer of ’94. A one day, - a two day thing at Sulfur Springs. It was other teachers from this district and other districts talking about better ways to evaluate, better adjectives to use, how we can communicate what we’re trying to communicate to the student teachers. If it’s good news, how can you say it. If it’s bad news, how can you say it (Stephanie, school representative).

Formal workshops for technology training were held. The workshops were designed to train all participants in similar software products so that they could all be “on the same page” (Frank, university representative). The delivery of the technology training sessions occurred through a series of trainers, including a hired technology coordinator, a selection of graduate students, and a university professor (Larry, university representative).

Another model of delivery that emerged was described as a train-the-trainers model:

And also, one of the things that’s happening in the school districts is that the school districts are selecting specific mentor teachers and getting them more current on technology so they have a trainer-of-trainer’s model kind of in place. ...of course, because we’ve really gone to a model that makes things site based, the actual
implementation is going to depend on each district; it’s going to depend on each building.

The purpose for developing a cadre of trainers was to build internal capacity and have mentor teachers take responsibility for delivering staff development (Kathleen, school representative).

Informal professional development was illuminated through a prevailing pattern of interactions. Frank (university representative) shared, “I think that the greatest professional development of all is the interaction - everyday interaction of a mentor teacher with the student, with a professor walking around and chatting with the mentor teachers.” Reflection was considered to be a professional development component intertwined with interaction processes, especially in regard to the mentor teacher:

...and for a teacher to begin talking about herself as opposed to talking about the intern - that’s progress. I have seen more professional growth when, at the point where the teachers begin to talk about themselves more than about their intern. That’s probably worth more organized staff development than anything I can think of (Frank, university representative).

That’s called metacognition, and the whole point, in my opinion, of improving the profession is based on this. Okay, just think about this - “I can read back my lesson plan in my mind while I’m standing on my feet in front of my students. I can redesign the entire lesson, move on, and never miss a beat.” That is a master level teacher. How do you get there? You have metacognition. Once you’ve experienced it, the confidence builds and all the other stuff you need, not the other way around. How do you get metacognition? Through self-reflection. Through being so demanding that you analyze (Kathleen, school representative).

Interactions between the mentor teacher and the interns were described:

One mentor teacher said to me, “Now, my intern was off with my other team member for four weeks and when she came back and said, ‘Man, these kids have really made incredible progress. Are you aware of how much they’ve learned since I’ve been gone?’” Well, of course the teacher is not aware because the teacher is there every day. So, they have gotten some affirmation. Evaluators don’t come in and give affirmation like that. The interns and residents do because they see it over time. They
see things other people don't see and they share those things because they have learned to be reflective (Carol, university representative).

...when they watch the intern and resident interact with students, and they see students learning some new things from the interns and residents that they wouldn't learn from them, well - it's forcing them to reflect on their own teaching. Whereas if I'd been the evaluator and said the same thing that the intern and resident said, it would have been me against them (Kathleen, school representative).

Mentor teachers are learning from the interns by modeling and talking about what they are doing. Larry (university representative) suggests that “the reason they (mentor teachers) are developing themselves is because they have to talk about what it is they’re doing and why they’re doing it.”

Mentor teachers shared their perspective on professional growth opportunities provided through various interactions:

Change has been tremendous. I’m not anything like I was. I just think like every semester I change. It’s really opened my eyes. ...It’s just being more aware of other ways to do things. I’ve been in third grade now for six years and my intern just brings in new ideas all the time. It seems like I have a broader outlook on, “Okay, this is not the only way to do it” (Tracy, school representative).

They (interns) make you think. For example, one day an intern asked Ms. Sharp, “What do you do when they (students) keep reading so slowly.” And she asked several question - this was in her reflection journal. It really made us think. I personally didn’t know the answer, so guess what? I went and found the answers (Alyson, school representative).

They (interns and residents) have given me a sense of freedom. I was always - I didn’t want anybody to come into my room. I didn’t ever want to leave. I was very possessive, territorial, - I don’t know what is was. But since I’ve had someone else in the classroom, and I’ve had to give over some control, I’ve found it’s a wonderful freedom, and I love to sit back and watch my kids - listen to the funny things they say (Kelly, school representative).

Yeah, it would be hard for me to go back and do everything all by myself. Because I expect so much to be going on in the classroom now. And if I had to go back and just be one person - no way (Sylvia, school representative).
Interactions between peers, teacher to teacher, supported additional professional growth opportunities:

...this program is not only going to put a higher quality of educator in the classroom, but it will directly impact those who are already in the profession. It will either motivate them to grow, stand up for their profession, become aggressive and assertive, or it will encourage them to get out. And there has been no other way that we could have done that. It doesn’t matter, you can have 20 evaluations from evaluators, but still evaluators cannot kick out a bad teacher unless they do some criminal offense. We can lecture to people all day long about being better teachers. We can have motivational speakers all day long. But the only thing that will change a professional group is when their own peers demand more of them...

We believe the system will police itself. They’ll get tired or their peers will apply pressure and they’ll drop out or they’ll go to training. Of course that puts the pressure on staff development to be practical and usable.

Larry (university faculty) shared his perspective of professional development occurring via interactions between professors and teachers:

When we first started the center, one key that helped me put it all back in perspective again was - we initially, that first semester, set up our (university course) seminars so that we would demonstrate strategies in seminars. They (university interns) would have to take a strategy out that we had demonstrated in seminar, and within the next week to two weeks, they had to do it in the field and then come back and report on what they were doing. ...and a wonderful mentor teacher asked me one day, because I said, “Marsha, we’re so stressed and we don’t know how to get all the content into the seminar because we’re only doing the seminars once a week and it’s all day, but we don’t know how we’re going to get this in.” And she look at me and she said, “Don’t you trust us? ...I was an undergraduate at the university. I finished my master’s degree there. I know the strategies. Don’t you think I can model the strategies? Couldn’t they see it from me first?” And I was like - aha - paradigm shift...

...So, as far as getting into the schools, I love getting into the schools. It’s getting to be a thing where I will be invited to do demonstration lessons within teachers’ classrooms and that kind of thing now. So, we started inviting teachers to come in and present in our seminar....It’s going both ways at this point in time.

A “revolving door” of new mentor teachers was described as providing a constant surge of professional development needs for university professors to address:
And you’ve got brand new mentors jumping on board with very professionally developed mentors already in place. And it’s almost as if the new people jumping on board have to go through this developmental process. And that - part of these new people jumping on board - well, there’s a lot of synergy there that keeps us (university faculty) going and thinking. It’s like there’s always new people coming on and we’re (university faculty) always having to reflect and talk about what we’re doing (Larry, university representative).

University professors provided “supportive reflection” opportunities for mentor teachers:

... to me the key here is supportive reflection - the university liaison or person going in and just picking and pulling at little things. I very seldom have to answer a question when I’m out in the field. All I have to do is ask them. So basically what happens is they ask me a question, and I say, “Well, what do you think? What do you do?”

Pattern 3. Effects: Changes in Roles, Responsibilities; Empowerment; Relevancy

Effects. The vision that emerged for site specific and global professional development opportunities was not perceived as being pervasively implemented among all partners at the time of the interviews. The various examples shared depicted site specific pockets of success. When I asked if all levels of learners, including university faculty, university students, and mentor teachers, participated in professional development opportunities, Carol (university representative) shared, “I can’t say everybody is involved that needs to be, but what I am saying is that everybody has been invited and everybody has had an equal opportunity to participate. Some, of course, did it more than others, based on their own styles and needs.”

The various interactions, as reported by the respondents, had an impact on the participants. An evaluation survey found that “field-based students began to feel that some of these teacher traits - or the important characteristics of effective teaching and
effective schools were important; they valued that more because they were in the field” (Frank, university representative).

The mentor teachers learned from the university interns. By helping the interns be more self-reflective, the mentor teachers were reported as being “more reflective” (Frank, university representative). Mentor teachers experienced a change in roles and responsibilities that nurtured feelings of empowerment. Their input was being sought and valued by university participants (Kathleen, school representative). Deborah (university representative) described empowerment of mentor teachers as a process in which they “learn to trust their own judgment”:

I’ll tell you what I think. People (mentors) wanted the familiar structure of, “Tell us what to do and we’ll do it.” But now they’re hearing, “You have the freedom to do what you think is best for that student. You’re the one that’s working with that intern or resident. What do you think they need?” And the mentor teachers have had to learn to trust their own judgment, especially in (intern and resident) evaluations.

Mentor teachers described empowerment in a variety of ways:

And that was real hard for us. That was something that was really hard. We kept expecting the university to give us more structure and guidelines, and they kept saying, “It’s your decision.” And we weren’t accustomed to that. And finally we decided, “We’re doing right” (Sylvia, school representative).

We have more input. Before things had kind of been done for us or to us or something, and this time we had more, much more input. And I think that was exciting for us (Tracy, school representative).

I think we see ourselves more as professionals with a little more self-respect because someone is giving us some credit (Alyson, school representative).

It’s provided a link with the university. It’s kept me up to date with what is current, what’s going on. It has made me reflect on my teaching and on the way - the kind of person that I am (Sylvia, school representative).

Somebody has demanded us to be professional, rather that create an environment that we have always felt is professional, but yet we’ve not verbalized and have not taken
up that responsibility to be a professional personally. And I think they (university faculty) have pushed us into that. ...and yes, now I can help in this situation and I can help another person (Kelly, school representative).

Empowerment created new leaders. Mentor teachers have taken on responsibility for setting up campus meeting where interns, residents, mentors, and liaisons gather together to dialogue. Stephanie (school representative) shared, “There are some areas that I have stepped out in and taken some responsibility for that I would have never taken four years ago.”

University faculty have also experienced role changes. In seeking input from field-based practitioners, university faculty was forced to look at the relevancy of their course content (Frank, university representative). Frank describes how the university participants “began to almost reverse their paradigm” of focusing on moving from “theory to practice” to instead, moving from “practice to theory”:

Now, remember, the faculty members who participated in the program were volunteers. ...They were beginning to realize that what they thought was important when they were on campus turned out not to be so important - that they had their priorities, their focus on theory - theory to practice. They realized that they can go from practice to theory just as easily. ...And so, university faculty members began to almost reverse their paradigm and start off with, “What are you doing right now in the schools; what do you need to do that to survive?” And so they began to go from practice to theory. They also began to really recognize that much of what they thought was important, was really more important for experienced teachers - but not necessarily for novices.

University faculty members were perceived as learning from the interns. Carol (university representative) shared the following comment from a university professor:

Now that I am out there every week or when I am ...interacting with these individuals (university interns and mentor teachers), I hear them say things that I said in their seminars. It causes me to take a step back and reflect and think about myself and my practice more. It hits home so much more now than it did in the past.
The process of the various interactions has had impact on the public school children (Carol, university representative). For example, the mentor teacher and university intern have attended and shared staff development opportunities together and created what Carol (university representative) identified as a “back-up system”:

When you look at the philosophy long term, it was, in fact, kids - K-12 learners we were targeting. When public schools began to invite preservice (students) to attend the professional development with inservice (teachers), that meant the mentor teachers took their interns and residents along with them. And then they went back to their classrooms and together they were able to do whatever it was that they were directing towards their K-12 kids because both entities had been involved in that process. It was a big implement. A backup system.

Larry (university representative) supported the concept of a backup system when he shared, “The one’s that actually benefit the most are the children because it’s the mentor teachers in concert - in tandem - with the preservice teachers who are getting things produces and done for the children.”

The increased interactions and collaborative processes of the initiative have resulted in participants feeling less isolated:

...Oh, and there’s something else I almost forgot... I’ve watched the doors. I’ve been here three years. And I’ve watched the doors open. Room to room the doors are opening. They’ve been closed the whole time I’ve been here, until now (Tracy, school representative).

University participants are integrating their course work and planning together for the first time. “It’s a shared team teaching process for all the seminar content and that is the way they do business now” (Carol, university representative).

The increased interactions between the professors and the teachers has developed into an ongoing process of follow-up (Carol, university representative). As professors and teachers interact, they are continually reflecting on “what is working and what is not”
This process of ongoing follow-up is also supported by the formal training-of-trainers model. Each campus based trainer is available on an on-going basis to help his or her peers.

**Pattern 4. Oh Yes! Technology**

*Vision.* “To enable technology to be utilized in instruction” was built into the NET-CPDT vision (Carol, university representative). Due to the initial focus on “learning to live together”, readiness for integrating technology into instructional practices was delayed (Frank, university representative). Technology was envisioned as a “major hurdle”:

> We began to see that in our vision we were going to have to almost start from scratch in terms of technology. And not just using it, but becoming literate first - let alone trying to use it to integrate with instruction (Frank, university representative).

The NET-CPDT vision was that “we would all learn together providing we upgraded everybody’s technology and then we would all learn the same stuff - the same word processing and so on” (Frank, university representative).

*Enactment.* Implementing professional development opportunities for technology unfolded through a series of formal and informal events:

Technology was not on line the very first semester that we began. We brought it on line the second semester with a person who was hired through grant funds. But we found it very problematic because when you have someone who is a technologist, they aren’t necessarily teachers. And when you have someone who is a teacher initially, they weren’t really technologists. Anyway, the technologist would - how do I say it - would almost treat the mentor teachers and the preservice teachers as children and almost like, “Don’t touch the mouse. Keep your hands on the keyboard...” - you know...

...Now, for technology sake - very truthfully, at the beginning, that was a good person to have on line. Because the person that filled that position ordered hardware, ordered software, was able to consult with the district to give them the information
they needed. The difficulty came with that person who was a technologist when everything was here and then they were suppose to teach people how to use it. That was when things got real problematic (Larry, university faculty).

So, the first progression of events related to technology infusion was in the hands of the technologist. The technologist initially focused on equipment purchases and then attempted formal training sessions for university interns and mentor teachers. When the technologist’s position was terminated the following semester, they “hired graduate students who were educational technology people to come in and help” deliver the training sessions (Larry, university faculty). One doctoral student in particular helped them integrate technology components into their syllabi. When she graduated and accepted a job elsewhere, they relied on a “math professor who was more of a technology person than an education person” (Larry, university faculty). He would take the university students into the lab and teach them technology skills. But, what finally prevailed as successfully integrating the use of technology into instruction, was the informal interaction between the university students and the mentor teachers:

But the bigger picture is what actually worked because as interns and residents went out into the field and began helping the teachers, the teachers picked it up and the interns and residents were actually teaching the mentor teachers. Now the mentor teachers have turned around and have begun mentoring the new interns and residents in how to do all this. But the interesting part that happened was that initially we were taking the second semester preservice teachers and had them doing the technology piece. Well, once the mentor teachers saw the value of the technology - as far as grading, as far as preparing newsletters, as far as doing overheads and transparencies, whatever - as soon as they began to see the value of how that could be integrated, they started saying, “Hey, you (university) guys need to do more with technology the first semester they’re in the program, not the second semester.” ...So, we pulled some technology components into the first semester of the internship (Larry, university faculty).
Every mentor teacher received a computer and a printer. A “classroom of the future” (Carol, university representative) was established in every partner school district. The classroom of the future meant that “somebody in the schools somewhere was not going to get a computer and a printer for themselves, but they were going to get four or five networked computers that their students could work on along with an instructional cart that had a CD ROM and LCD panel” (Carol, university representative). A site specific success story of implementing a group of networked computers follows:

We have a lady, a mentor teacher, who has been teaching - I don’t know - at least 25 years who said, “I want a classroom of the future.” I mean this lady has never used a computer. She really wanted to do this and really wanted a class of the future and she has... you should just see the stuff she does with the kids in her room. You know, she’s a fourth grade teacher in a building who does major, major, major technology. In fact, her whole room - I think she has one, two, three, four, or more networked computers. ...they put the monitor on a lazy susan. Instead of having desks, the kids have their desks at this round table. They have keyboard access and they can turn the monitor to wherever they sit. Then the teacher is networked and she can project instruction and the kids can enter into that process from their round table because they have access from where they are at. It’s been great, but the drawback of that is there is only so much money and there is only so many “classrooms of the future” established (Carol, university representative).

Effects. The technology equipment was perceived the initial “carrot” that resulted in increased levels of participant involvement:

Technology was really the carrot -especially in initially getting mentor teachers involved and districts involved in buying into the program. The grant was written in such a way that it was extremely people poor, very heavy on technology - but it really put a lot of technology in a lot of places. And that was done very purposefully so that when the grant money ran out, there would be some technology in place (Larry, university faculty).

Training issues caused a delay in implementing the process of learning how to “use” the technology equipment. For example, university faculty, in collaboration with school
partners, were already designing university coursework to be delivered on site.

Consequently, technology components were not integrated into the restructured syllabi:

We had integrated all of those courses into one syllabi per semester and we found initially that we did not integrate the technology. The technologist could not see how that was integrated, how that would fit. And so, the technology was still kind of outside. ...So, it was like we were doing integrated seminars for math and science and literacy and classroom management and all that stuff, but then the technologist would take them (university interns) separately and do something different with technology only (Larry, university faculty).

Participants most impacted by technology are the university interns and residents.

“We have doubled our efforts in training interns and residents” (Frank, university representative). Frank described implementation of technology in the schools as ranging from the successful use of the “lazy susan” example to “computers in classrooms still sitting with dust covers on them.” Frank perceives the university as “lagging behind.”

Larry (university representative) shared his perspective:

I still as a university professor have not had what I would consider faculty development. ...Most of what I’ve done has been self-trained.

University of North Texas
Center for Professional Development and Technology

Pattern 1. Barriers to Vision: “Flying Frisbees” and “Templeton the Rat”

Vision. The content of the initial vision that led to the creation of the NT-CPDT collaborative emerged through a process described as complex and “highly political” (Mike, university representative):

...Anyway, what happened, and this relates to the vision piece, is that any time that there is inducement money out there, any time that there are grants out there, one of the processes is trying to figure out what it is that the grant wants. In other words, how can you get funded becomes a question, rather than how can we do great things. So, it was originally inferred ...that the big piece of the CPDT grant was to be the technology piece.
Technology became a focal point for funding purposes. At this point, different organizational agendas of key players erupted. First, the university wanted to partner with Dallas, an urban area, to "have a high-tech pipeline" (Mike, university representative). Dallas agreed to participate to avoid the chance of UNT "going thirty miles down the road for a different partner" (Mike, university representative):

So, what I would respond to you in terms of a vision, the first vision was a technological one, but it was a technological vision that served basically a political agenda. How can we become more affiliated with Dallas? And then Dallas' response: How can we do a thing that will keep us from being embarrassed by having it go 30 miles down the road? And that resulted from the interpretation of the RFP as being primarily centered on technology, particularly distance learning (Mike, university representative).

The process of selecting specific PDS sites initiated the implementation of the "interpreted" vision. The selection was based on needing "some inner city schools, an elementary and middle school in close proximity to serve as the pilot sites that are near a fiber optic trunk line" (Mike, university representative). So, the decision about where to locate the initial PDS sites was based on finding a nucleus for the initiative that was on a fiber optic trunk line. The two particular schools selected were considered to be "two of the lowest performing schools within this area with administration and teacher problems" (Mike, university representative) and the NT-CPDT initiative was seen as a possible avenue for "mass transfers to get the teachers out of there, get new ones in, get the principals out, get new ones in (Mike, university representative).

After the PDS sites were selected, initial planning retreats began in spring of 1992. The political background cast a strong influence on the sessions:
They were sessions attended by a constant group of teachers, and by a rotating group of administrators, each of whom would come in and toss in their political agenda and we would have to deal with that kind of thing - not really being able to make any kind of consensus; not really having any leadership from the school district or from anywhere else that would have allowed that to be, because it was such a tumultuous place. ...So these meetings were just - I used to characterize them as *agendas flying around like a barrel full of Frisbees*. Just throwing them all over the place and nobody being able to reach any kind of consensus agenda about these schools. ...and the teachers were the constant group, but of course, they were all intimidated by all this administrative mess (Mike, university representative).

The initial interpretation that “technology was to be the major issue” did not come to fruition. Instead, the Request for Application (RFA) and the law for the Texas CPDTs that was written by the state funding agency was released emphasizing “collaboration as the major factor” (Mike, university representative). The planning meetings with the PDS sites continued and “collaboration” was added as a focal point. Mike (university representative) discussed a retreat that was held that June, in which teachers and building administrators provided input in regard to a vision for the initiative:

They had visions of collaboration - about how they wanted respect and things like that. They felt they could offer some things to the preservice teachers and they could use the preservice teachers as basically more adult bodies in the classroom to help with their kids and so on.

Jill (school representative) recalls early discussions about “being a center that would be used to train preservice teachers.” Susan (school represented) elaborated:

When the concept was first introduced to the staff, one of the first questions the very first day was, “What are the current teachers to be mentors, going to get out of participating in a PDC project?” And a lot of the things that were mentioned were staff development. So that was - it was a general, overall concept at that point, and it was nothing specific. ...They did say that there would be a technology component and that mentor training would occur, but I don’t remember anything more specific that that.
By pooling together ideas from meetings and individual resources, the NT-CPDT vision emerged. Mike (university representative) summarized the vision and vision-building processes as follows:

The focus was on learning rather than teaching. So that’s the vision - I’ve just described it. It’s community learning with mutual respect through developing relationships over time with a focus on learning, particularly learning of the students in the schools as the common goal of all. But, my point is, the process of developing the vision was not evolutionary. It was not collaborative. It was political. I mean, the whole thing was political.

**Enactment.** Political ramifications from the initial vision building phases entered into the implementation phases of the NT-CPDT.

Okay, the implementation was again, my memories of this thing are, it was just a constant struggle. There was not, I mean, part of it was there was no common vision. The inference from it is what I call a “Templeton, the Rat Notion” - what’s in it for me? And the attraction was - how can we get some technology into these school districts? And I think that was the carrot. That was the thing that brought people in. (Mike, university representative).

Due to the emphasis on technology, formal technology training sessions were planned for early implementation in the two Dallas PDS sites. One of the barriers to the initial success of the training involved the delay of installing the distance learning equipment:

It seemed to take forever to get the equipment installed. We had even had some training a long time before we even got the equipment. Remember? District personnel from Dallas ISD worked with us on computers. We went to Apple on a Saturday. We also went to the technology conference - before we even started with anyone in our building. But it just took so long before we had equipment in our building - you know, you kind of forget what you learned if you can’t practice. I’m not sure if we even realized what the distance learning equipment was for (Sheri, school representative).

Staff development in areas outside of technology was perceived as limited during the first year of the initiative:
I heard that they had really only - I’m not sure there was a great deal discussed about mentoring. And they had one mentor training session held in the summer...which many people knew nothing about. And that was it (Shiela, university representative).

**Effects.** The political aspects present during the initial phases of the initiative had impact on the vision:

So, now you have this very complex political environment and that all of these decisions have been made, not on the basis of a vision about what can happen in terms of - that there’s this vague notion of vision that says that this initiative can be used to improve schools and to provide an extensive field-based component for teacher education. Okay, that’s just this vague vision. There was no real vision of collaboration whatsoever. There was no real vision of staff development at that point. ... all those kinds of things that we came to call the key attributes - collaboration, restructured teacher education, staff development, and technology, all those emerged later. They evolved (Mike, university representative).

The initial focus on technology impacted the partner relationships. The promise of technology motivated the schools to become involved. “That was the carrot” (Mike, university representative). Mike perceived the distance learning equipment as “a very expensive rabbit trail”:

See all the early focus on distance learning was, in my estimation, a very expensive rabbit trail. We should have been focusing on computer-based multimedia stuff from the beginning and letting the distance learning stuff take care of itself. But it was a sexy piece. It was the kind of thing that they were hearing from the legislature (Mike, university representative).

The **focus on distance learning equipment delayed practical application** of the technologies:

If we were to learn any lessons, it was certainly to have a plan for using the distance learning lab with kids before it was ever built or else elect to do something with technology that would be immediately useful to kids. Now, the kids have benefited from the technology because there are computers in every room. We’ve got the computer lab. We’ve got this room (distance learning room). So they are benefiting. But we have not had any real direction for whatwe should be doing with this. So, we have had to find our own answers. Yeah, it should have been planned out before we ever did it (Shiela, university representative).
Mike (university representative) described a "need for readiness" as a missing factor during the early phases of the NT-CPDT initiative. Lacking a "need for readiness" impacted the process of how the initiative evolved:

...but I remember how dissatisfying all that was because the technology was never there when it was needed and stuff like that. So you’ve got to have - my lessons I would take out of Dallas is you’ve got to have readiness. And readiness takes a long time to develop. And a lot of it’s trust and openness and bridging kinds of things. Then you’ve got to have readiness as far as - well, the equipment’s got to be there in terms of the technology. And you’ve got to have people who actually see a problem that they want fixed rather than imposing it in some way. (Mike, university representative).

The “barrel full of flying Frisbees” and the difficulty with developing “consensus” at original planning meetings, resulted in the partners not sharing a common vision and a common commitment to an end product (Mike, university representative). This led to difficulties in early implementation at the Dallas sites. However, the difficulties were overcome by “a lot of that one-on-one relationship building and informal staff development that resulted from basically Shiela’s (university faculty) efforts” (Mike, university representative). Shiela (university representative) supported the notion of “overcoming difficulties” in the following remark:

You know, we have come through a lot over the past three years. Somehow the right ingredients have fallen into this school (Dallas elementary site) - administratively, interns, teachers, UNT folks - to make it work. I was saying just to Mary Beth the other day, “You know, it’s not just the CPDT that has made this program work over here.” And she said, “Well, I think that’s called collaboration.”

Pattern 2. Breakthroughs: The “Aha” of Site Visits and Reflective Follow-up

Vision. The initial vision was described as “vague”...

...there was this vague notion of vision that says that this initiative can be used to improve schools and to provide an extensive field-based component for teacher
education. Okay, that’s just this vague vision. There was no real vision of collaboration whatsoever. There was no real vision of staff development at that point. ...all those kinds of things that we came to call the key attributes - collaboration, restructured teacher education, staff development, and technology, all those emerged later. They evolved (Mike, university representative).

Susan (school representative) recalled no “specific” components of the vision that resulted from the initial planning sessions. However, respondents discussed a series of site visits that were described as the “turning point” for the NT-CPDT (Mike, university representative; Susan, school representative; Shiela, university representative; Mendy, school representative). “In essence, that series of trips produced the vision that was never there before” (Mike, university representative).

Enactment. The NT-CPDT collaborative set up a series of formal site visits to school/university partnerships across the nation during the second year of implementation:

...we used that money to do all those trips to San Diego, Seattle, and Maine. And when people went and saw what is possible and what could be done, then it had effects over above our investments. For example, the peace patrol thing that Hodge (elementary PDS) brought back and started doing. They saw that out there (San Diego). They took back not only information about what a professional development school relationship could be; they took back information about what professional development could do for the school as well (Mike, university representative).

I think some of the individual sites, from what I hear people talk about, I think if they went on those site visits that first spring - people went to San Diego, Seattle, and Maine - I think the people who went to those various places have picked up some of what they saw happening (Kay, university representative).

Mendy (school representative) shared her team’s experience from the site visit:

Oh, everything! We learned everything from the site visits. We saw three different sites. Two of the schools were partner schools with each other. We really liked that because they were two totally different populations and we were able to see how they set up the technology part of the program and how they were able to teach the interns and how the interns went into the different classrooms. We were able to see scenarios - even the set up of the PDC classroom - something that was totally impacting the students’ experiences because we had seen one that was in a portable
and the other two were housed inside the school and the two that were housed inside the school - the feeling that the interns (because we did get to talk to the interns) the feelings that the interns had inside the school were completely different from those who were separated from the school - what they considered a bungalow, but it was a portable. In fact, the students inside the school had a lot of ownership of what was going on; where as the other ones described it more of like they were just students there. And so we really focused on how we wanted our program to look. The site visits really helped us get that picture...

The site visits triggered team-building and vision-building activity at specific PDS sites. Participants began to interact informally and entered into increased dialogue with each other about the concept of PDSs. Team members participated in debriefing sessions regarding what they had experienced:

I really think the turning point of this whole program was the debriefing of even the San Diego trip. That Sunday morning was where we shared ideas and focused on what we had accomplished and what we wanted to do and we borrowed ideas and it changed it for us. I think that was the point in which - that made our program as successful as what it is (Susan, school representative).

Mendy (school representative) discussed the process of vision-building that occurred in her school after the site visit experience:

Anyway, when we got back from San Diego, we started discussing the PDC at our meetings. The “ideal” was one thing that we really focused on that planning year. We sat down and we wrote down what a mentor teacher was - what a university supervisor was - what an intern was - what a teaching assistant was. We outlined everyone’s responsibilities.

Effects. The site visits impacted the vision and helped the participants “focus on what they wanted (their) program to look like” (Mendy, school representative). The site visits provided a “picture” (Mendy, school representative) and resulted in building a vision “based on something that was in existence somewhere else” (Mike, university representative). Mike connected the site visit experience to “that old Chinese proverb about: I see and I understand.”
Susan (school representative) felt the site visit experience had given the participants a sense of empowerment and excitement:

...but, I think one of the biggest things it (site visit) did was it got the people involved excited, and it empowered them, and it gave us, I think it was - focus. It enabled us to come up with goals. And we got together on our own several times during the summer during our own time because we wanted this program to work. And this was directly because of the trip (Susan, school representative).

The process of collaboration was impacted by the site visits. Shiela (university representative) saluted the site visits for “gelling the program” and enhancing participant “buy-in”:

I definitely think that (site visit) was the event that led to the gelling of the program. And I think that once we started - you know, I think it was Schlechty that talked about how people are usually concerned with getting everybody to buy-in all at once, where what you need is an excited small group and that excitement builds. And that absolutely has happened here. ...I have seen much less concern after the trip to San Diego about the lack of buy-in. More, I saw problem solving in the leadership team meetings, a willingness to meet after school, and certainly a willingness among those that were really committed to the leadership team to go way above and beyond the call of duty. ...There’s a great deal of ownership (Shiela, university representative).

Mike (university representative) discussed how the site visits impacted a districtwide initiative and resulted in collaborative planning between the university and the schools:

What I saw happening in Denton (ISD) after those site visits is that people came back all charged up, that literally key people in the district, were sold by those site visits; that this was something that would be good and could be done and should be done. ...(A key district person) saw the school in San Diego - or had people report on the school in San Diego that had the classroom. Remember the Chula Vista that had the PDS classroom. We came back and we were building, we were getting ready to build Thomas Rivera (elementary school) at that time. And we asked the architect to explore, and (the key district person) actually sold that idea to the executive council and found out it would only cost us a few thousand dollars at that stage to modify the plans in order to get a multi-purpose room with those two-way mirrors and all other kinds of stuff. And so that’s a fundamental piece of collaboration that resulted from developing a vision based on something that was in existence somewhere else; seeing something else. And so that old Chinese proverb about: “I see and I understand.” That worked there.
The site visits provided a natural follow-up process. As participants discussed their site visit experiences, they found themselves constantly reflecting upon the progress of their own program. Shiela (university representative) described this informal follow-up that resulted from the site visits as “effective staff development”:

I think site visits are invaluable because you find yourself constantly reflecting on what you saw. And that needs to be considered to be effective staff development because you either have your own ideas affirmed or you get new ideas - and we are not above stealing ideas...


Vision. The vision of creating a “learning community” seemed to break through the initial politics and “tremendous collaborative effects” began to appear after the site visits (Mike, university representative). Participants recognized how a university/school partnership was mutually beneficial:

...They (the site visits) also showed us how it is to be a mutually beneficial program for both them and the university. Because when you first look at a PDC, you only think about it benefiting the university - or actually you only think about it benefiting the university students. And so we were able to see that it was more like a relationship - ...a partnership trade-off of expertise and skills. We help the university and they in return would help us. It was our hope at Hodge (elementary school) that our campus would grow a lot from the university’s constant presence (Mendy, school representative).

Professional development opportunities were envisioned as being inclusionary of all participants in the partnership, including preservice and inservice teachers as well as university faculty (Shiela, university representative).

Enactment. Professional development opportunities unfolded through various avenues. The most global training that was shared was via the formal organization of a
technology training cadre. At least two people from every PDS site were selected to receive intense training on multimedia equipment and application software:

Anyway, we all met in this room at Denton West High and you were there with like ten multimedia stations. It was great. I think there were at least two people from every PDS site - about 20 or 25 of us - and we learned how to use those AV machines. You and John even made a video on how to hook up all the stuff - that was a big hurdle for me. But we trained - a lot of training - and then went back to our buildings - we got to take the station back with us - and trained our teachers. Remember, you even helped us schedule our training sessions with our teachers. We trained that entire year in our building on things like HyperStudio and Kid Pix - and we're still training on multimedia (Gary, school representative).

The "vast amount" of technology training was perceived as one of the "biggest" and most "pervasive" training events that occurred (Mendy, school representative). Mendy shared that in her school, the training continued to be ongoing:

Um... I was looking at the calendar just the other day and there is probably a couple workshops coming up that are after school for using the different software the PDS has provided us with. There's probably at least two workshops a month - and on an ongoing basis - even more. Along the same line, the technology liaison trained the PDS (university) students on the multimedia cart (Mendy, school representative).

The university interns also were described as learning through somewhat of a back door method, in which "simply being exposed to all the technology in the schools" during their field-based experiences was an avenue for learning.

Mentor teacher training was another global arena for professional development opportunity. Various external facilitators were brought in for training large groups of teachers (Shiela, university representative). One group of teachers, administrators, and university faculty were sent to a summer institute on cognitive coaching. It was the intent of this group to return to their campuses and train their peers in coaching strategies to use
with the university interns. However, the participants reported not feeling expert enough
to deliver:

Anyway, when I got back to my campus - well, it was just one of the things I didn’t
do full blown because I think it was so extensive and my training in it didn’t make me
an expert and um... it was just something I shared with the faculty and gave them
suggestions on how to use it with their students (Mendy, school representative).

Both the technology and mentoring training had components delivered through the
use of a cadre of trainers trained for building internal capacity. The *trainer-of-trainers*
model was perceived as an effective staff development model for “*capacity building*”:

I think the whole - the effects of producing those teacher cadres - I think is one of the
biggest pieces in terms of a capacity building structure. Having teams of teachers
who are experts in technology, or collaborative learning, or cognitive coaching, or
whatever the particular topic is, I think that is a very important implementation effect.
And so I think that we literally put capacity in those schools that was not there before,
and I think that principle of having built capacity at the building level is an excellent
source - provides excellent potential for change (Mike, university representative).

Other *formal* types of professional development included participation in *summer*
*institutes, local and national conferences, and workshops* delivered on site by university
experts (Shiela, university representative).

Numerous site specific examples of *informal* professional development opportunities
were shared. Geri (school representative) felt there was “a lot more sharing in an *informal*
way.” For example, teachers who had no previous background in technology were
currently at a comfort level where peer teachers were going to them and asking them
questions about technology (Geri, school representative). Peer support and sharing
between teachers was also described through the following process for selecting mentor
teachers in an elementary school:
I think the leadership team assigning mentors has been good. And I think that it really helps these teachers grow when other teachers are saying, "I think you’re competent. I want you to be a mentor" (Geri, school representative).

*Informal interactions* with the university professors were also discussed as a source of staff development:

...it also seems to me that some of the teachers certainly are looking to the site coordinators (university faculty) for some staff development. Some of that occurs in very informal ways, just through meeting or stopping by to talk to somebody after a class or talking about a student and how we might better help the university student acquire some skills. The teachers start seeing things and saying, "We need mentor training. We need to learn about gangs." Some of the kinds of things that our (university) faculty are now providing for the students, they are now being asked to do the very same thing for the teachers. "If it’s good enough for the (university) students, then we need it too. We need to know how to plan better lessons. We need to know how to be more inclusive in our classrooms. We need to know how to accept diversity or how, you know, - to use better teaching practices for children who are linguistically diverse" (Kay, university representative).

Mentor teachers also experienced professional growth from interacting with the *university interns*. Susan (school representative) shared:

...Because it gave me the opportunity of viewing someone who was just starting in the classroom, and it makes me wonder what I looked like when I was starting in the classroom. ...And it was nice to learn from this. The intern had different strategies, or she wanted to do a different activity with the children, or whatever.

A mentor teacher shared with Shiela (university representative) that mentoring an intern had "helped him to grow up in the profession because he realized someone else was watching him and he better be modeling good things." Mendy (school representative) described how one of the mentor teachers in her building learned innovative science experiments from the university intern:

For example, last year I had one (university) student who was just on the ball all the time. I mean, a lot of energy. I paired her up with a teacher who had a lot of energy. They were just a couple fire crackers together. Anyway, one thing the intern did was bring in some incredible science experiments and I know that the teacher is still using...
these experiments this year. One that really sticks in my mind was one on electricity as a conductor. The intern ...lit up a pickle. She did real dramatic experiments that grab the children's attention. The teacher has really used those this year. It's a real give and take relationship and I think that that's been the biggest thing for all of us (Mendy, school representative).

University faculty were also perceived as benefiting from various informal professional development opportunities:

...Some of our faculty are trying very hard with their students to practice what they preach - by getting out into the schools more themselves - it's become obvious that (university) faculty are spending more time out in the schools, perhaps planning and meeting with teachers and principals and planning course instruction (Kay, university representative).

Effects. Implementation of professional development opportunities impacted the vision of the NT-CPDT. The site visits planted the seed for developing university/school relationships. From that turning point, collaborative efforts emerged and barriers were broken. Mendy (school representative) described that the university was no longer "playing the boss" and that everyone was addressed by their first names, not by any "special titles." "And that really was a big thing for me because it made me feel like I had something to offer them just as they had something to offer me" (Mendy, school representative). Jill shared a similar feeling in her statement, "It was always refreshing to see that you could come in and you could be a part of a group of people and you weren't intimidated by the fact that all these people had Ph.D.'s." Trust between the university and the schools was built during this period of time:

I think there was a period of initial resistance and distrust because of all the political agendas up front, but we overcame some of that. And I give Shiela a lot of credit for building the trust of the people in Dallas and actually having this site which has become a showcase site in a lot of ways for visitors. In Denton, I believe that through my efforts and through some others that we were able to - particularly your relationship with (the district technology director), all those staff development
workshops that you did in Denton - I think that by watching university people working with them on their goals - I think they came to have a lot more trust (Mike, university representative).

The various informal and formal professional development opportunities provided groundwork for personal and professional changes for NT-CPDT participants.

Teachers are “treated more like professionals and are feeling more like experts” (Mendy, school representative). Part of this empowerment is due to the teachers “actually being responsible for some of the instruction for undergraduate students” (Kay, university representative). Kay elaborated that she felt teachers were “beginning to have more ownership of the kinds of learning experiences that undergraduate students have.”

Teachers feel that “they have input; that their opinions, their skills, their knowledge are valued and are important” (Kay, university representative). Teachers also have experienced empowerment from professional activity made available to them through their interactions with university faculty:

I’m going to go back and mention the networking between the faculty, the Cowart (elementary school) faculty and the university faculty, just for a minute because I think without that we would not have had the opportunities that we’ve gotten to be able to travel and to present and to even participate in programs that normally we probably would not have even tried. And just the fact that we had someone here from the university just to kind of say, “Okay, you can do this. Let’s do it together.” For example, we were able to write - and receive a grant for this telecommunications thing we were doing with another school in Guatemala (Jill, school representative).

Mendy (school representative) shared her own personal growth for being involved with the NT-CPDT:

Oh wow, I don’t know where to begin. I think I used to think of myself as just a teacher and there is not a bone in by body that says that anymore. I do a whole lot more communication. Looking at myself two years ago, before I began being site coordinator and looking at myself now, I can’t believe from point A to point B. I am willing to tackle any kind of problem, - really. In the past, I would have kind of put it
on the back burner for a bit, now I'd just as soon take it head on because - I don't know - I think it's because there's so much going on all the time that I don't want anything hanging over my head. There was a time when I would have just lit it stew, and now I won't. You know, I just take care of it and it's much less painful than you think it's going to be anyway (Mendy, school representative).

Decision-making processes led to leadership development on school campuses. For example, at Cowart Elementary, the leadership team accepted responsibility for all PDS decisions. University faculty were present and active, but the teachers took charge of the meetings (Shiela, university representative; Mike, university representative).

Classroom teachers have emerged as leaders that were not perceived previously as leaders (Jill, school representative). For example, Sheri (school representative) shares how she personally found herself growing into a leadership position through exposure to technology opportunities:

...And, as far as technology, I knew nothing. I had never even touched a computer before all this started. And now I have become a trainer. ...well, I love it. I love training. I love working with teachers (Sheri, school representative).

University faculty experienced role changes and professional growth from increased involvement in the public school environment:

...I think most of the (university) site coordinators have grown professionally because of this involvement. As I hear them talk, they have had to rename courses; they have had to change the way they teach; they have had to change assignments; they have had to get out there and be present part of the time, and even do demonstration lessons. So, they have had to change (Kay, university representative).

Not all university faculty were perceived to be receptive to opportunities offered:

The university faculty, some of them are being exposed to it (professional development opportunities). Some of them are choosing not to avail themselves to the opportunities and they're coming along probably the slowest of all the groups, however... for some faculty it (NT-CPDT) is helping their development (Kay, university representative).
The process of collaboration resulted in a variety of benefits. Geri (school representative) shared that she has watched “classroom doors actually open up” and perceived teachers as feeling less isolated. Jill (school representative) described that teachers “don’t feel so isolated” because they have developed a sense of “ownership” in the program and want to be more involved.

The on-going nature of collaboration has resulted in built-in follow-up for staff development events, especially in regard to technology training efforts. Members of the technology training cadre are constantly present on each campus to provide on-going support (Sheri, school representative; Mendy, school representative).

Mendy (school representative) describes another source of follow-up through the role of the site coordinator:

My biggest follow-up, as being site coordinator, come from being with my students in the different classrooms. That’s when I get to see what teachers are doing - if teachers are using different strategies. We’ve worked a lot on how to utilize your teaching assistant to the best advantage for everyone - to enrich the (public school) students through the interns. ...And the only way I can see that is by follow-up and going in to supervise my (university) students. And, I see whether they are utilizing the suggestions. ...This follow-up gives me on-going information about what I should work at with my teachers. Also, what those students are doing in the classroom is also a reflection on me and what I’ve taught them.

Collaborative efforts have resulted in partners recognizing mutual benefits they can offer each other. Mendy (school representative) identified this process as “partnership trade-offs.” Through such “trade-offs”, participants within the NT-CPDT collaborative have built internal capacity rich in professional development and growth. Building professional development capacity within the schools was described as site-specific and diverse:
I guess I would have to preface most of my remarks in that it may vary from site to site because we have twelve different sites, work with three different school districts, and there are nine different programs out there. ...But I think one thing that most of our students are getting is experiencing the diversity of children in classrooms - multicultural diversity and linguistic diversity. I think we’ve had a real emphasis on special education or inclusion, inclusive practices, and I think most of our schools ...provide experiences with children from all economic levels. Our university faculty at the PDS sites and the classroom teachers are planning together to make those experiences not only unique, but also effective (Kay, university representative).

Mendy (school representative) summarized the various professional development opportunities in the NT-CPDT when she stated, “I guess we are all learning from each other.”

**Regional Collaborative Center for Professional Development and Technology**

**Pattern 1. Barriers: Islands of Commitment from the Bottom; Obstacles from the Top**

**Vision.** The Regional Collaborative Center for Professional Development and Technology (RC-CPDT) vision was developed through collaborative processes involving inclusionary representation from all partners: public school people, university people, and community people. Mary (university representative) described vision-building processes as follows:

We looked at the fact that we wanted to have mentors from the public schools pretty heavily involved because of the fact that they’re the ones that really know what’s going on in the field. So, we had them, we had administrators, we had - uh- from the public schools, from the university. We had faculty and administrators. We had partners like Apple Computer. So we tried to get all these people working together...

...then we all came together and we went through a process where we - well, we had a series of things we did. We had a consultant come in and we looked at ... what were the advantages; what were the challenges; what were the solutions. ...And we all sat around the table - board style - and each one had an equal voice.
A governing board emerged from vision-building processes and became the decision-making body for the RC-CPDT. During the first year of the initiative, Mary (university representative) described the governing board as being “cohesive and together.” She described the initial intent for university involvement as follows:

I believe, three of us (university faculty) volunteered to work with this thing...and then we had, I think we selected two people or three from arts and sciences to work with us. These were the people from the university. With the intention that those people would go back to the department and work with the collaborative in that manner.

**Enactment.** Mary (university representative) described barriers to the initiative that began to emerge the second year of the implementation...

I would say it began the second year when we went to institutionalization, you know, and we had to do certain things - then our (university) administrators started balking at the idea that now we’re going to have to put up the money to do these kinds of things and so they started bringing up all kinds problems. ...it seemed like every time you turned around, we had an obstacle...

...mostly, I think, yeah, I think it goes back to money issues. I think, also I don’t think we, you know, when you look at the university ...when you look at the research on collaboration, it says that you really have to have support from the top, from the president, from the provost, from the dean, in order for, you know, teacher reform to thrive. I’m not sure that we ever really had total commitment from the president. I think he liked the idea of - we got the grant, - we’re going to do all these things, but, yet he never came out and said, “This is what we’re going to do and this is why we’re doing it.” We constantly, I think we encountered problems with Arts and Sciences, also with education, because some people were so resisting reform. They wanted to do things the old way...

Mary (university representative) felt “things started to break apart”:

...by the summer of ‘94, you know, we had problems, but we always made it through those problems. And I thought, “It’s going to be all right.” But it wasn’t. Because in fall of ‘94, I was out most of the time because I got sick, and then there were a lot of program changes that were made without collaborative input from the (governing) board, you know, to the program and those kinds of things. ...(Administration) just came in and said, “This is what we’re going to do. Students are complaining. Therefore we’re going to do these things.” And the board was never involved
Mary (university representative) elaborated that the composition of the board was “completely” changed at this point.

**Effects.** University representatives were selected to participate on the governing board with the intent that would go back and work with their department to implement the initiative. This intent was perceived to unfold as follows:

In the case of education, I think we worked pretty well. But arts and sciences, I’m not sure the message was getting, you know, to the whole department with reference to what we were doing. And even in education, people began to, I think, to look at it as being very involved. But, we’re really not directly involved. You know what I mean? ..But, you can’t have everybody in the beginning (Mary, university representative).

The process of *institutionalizing* the initiative became a barrier for the collaborative. University administration was unwilling to commit to this process:

And we started talking institutionalization, and ...we had to turn in a document in February with what we were going to do for the institutionalization. It wasn’t the strategic plan yet, but TEA (state funding agency) wanted an idea of what we were going to do with budget, and what the partners were going to contribute and those kinds of things. At that particular time, we had a very non-supportive letter from our ...(university administration) that went to TEA with that document saying that, you know, that TEA should aggressively pursue, you know, more funding and that the legislature should do the same thing. In other words, at that point the message was, “No, we cannot fund it because we don’t have the money (Mary, university representative).

According to Mary (university representative) the non-supportive letter triggered “things to break apart.” At the time of the interview with Mary, these barriers were perceived to continue to exist. *Commitment* and support “from the top” was perceived as a critical ingredient for the initiative:

When you look at the research on collaboration, it says that you really have to have support from the top, from the president, from the provost, from the dean, in order
for, you know, teacher reform to thrive. ...Not have that support and total commitment is a critical factor for us (Mary, university representative).

Even though the barriers were perceived as "interfering" with the progress of the initiative, professional development and growth were still a stronghold for participants in the field. Mary (university representative) reflected:

...We all work together to support what we're doing because we're totally committed to helping students become better teachers, which is what it's all about. That part is there. It's just a matter of getting through these other kinds of interfering things at the university level. It is a tremendous barrier right now.

Pattern 2. Formal Staff Development: Five Themes and a Train-the-Trainers Model

Vision. Initial vision-building processes brought all partners together to create a vision for improving teacher education. All participants had "equal voice" and program models were developed:

...and that's basically what we did. And that's how we developed the model for the blocks - and how we were looking at field-based education, and the staff development component - everything (Mary, university representative).

Vision-building retreats and planning sessions resulted in the creation of the following vision:

...our vision was to develop mutual trust and respect for each other, you know, between the public schools and the university and all the other partners, so that we could work collaboratively to plan the model program that we wanted our students to go through. And essentially that's what we did. And we wanted to produce the best teachers possible...including their ability of being highly skilled community forces. You know, being able to use technology, and being able to integrate life-long learning, and all those things that we've talked about (Mary, university representative).

Initial vision-building sessions also resulted in the development of "ideals" for university students, classroom teachers, and university faculty. "We came up with a series
of indicators that would tell us - competencies for students and qualities for mentor teachers" (Mary, university representative):

...we had a lot of brainstorming, you know, and we just threw out ideas about what kind of teacher we wanted working with our university students. Some of the things were: they've got to be creative; they've got to be risk-takers; they've got to be innovative; ...highly-skilled communicators.

So, the collaborative designed the competencies for the university student and the quality indicators for the mentor teacher. Mentor selection, however, was the responsibility of the principal in a particular building. The principal was provided with the quality indicators prior to selection (Mary, university representative).

Enactment. Formal professional development opportunities were implemented based on site-specific needs that emerged through implementation of field-based components of the preservice program. Highlights centered around technology and mentoring/coaching needs. The quarterly reports (RC-CPDT,1994-95a; RC-CPDT, 1994-95b; RC-CPDT, 1992-93) provide an extensive listing of technology and mentoring/coaching training sessions that were delivered.

The “integrated curriculum” also was an area of emphasis:

...we wanted our students and our mentor teachers thoroughly familiar with integrated curriculum and the need for integrating curriculum in our public schools. And so our students, we have a seminar every week, and we have an integrated session every week where we try and tie in - these are block activities that tie the whole block together. ...Like - for example, I taught the language arts before, okay? And I used to have to teach - I always had them do thematic units - the process of integrated curriculum. I not longer have to do that because now it is part of what we all go through. ...Its not taught in every single course anymore. So, it frees up some of that course time for us to do more content with the language arts.

By integrating curriculum content, technology and multicultural threads were included “throughout” the curriculum:
Technology is brought into everything. This is why I say we don’t have a course in technology, because technology is integrated throughout. Also, we did not have a multicultural course before at the undergraduate level, and now we do. And, then multicultural skills and concepts are integrated throughout the curriculum - not only in that course, but throughout (Mary, university representative).

Staff development efforts and preservice program content focused on enacting similar strategies that focused on five themes:

If you look at our staff development, these are the things we focused on: technology, mentoring, multicultural, integrated curriculum, assessment, and so basically, I think there were five areas that we’ve worked on for the first three years. Those may become different. Those people become pretty proficient in those areas. Then also, I feel like you need to continue to touch base, you know, with those kinds of things that they’ve already learned and then add some new things to it (Mary, university representative).

Most of the staff development training was delivered by “in-house” experts (Mary, university representative). A train-the-trainers model was implemented and a cadre of participants was sent for specialized training and then charged with the responsibility of returning to their campus to train others. For example, “We had people go to some of the ASCD professional development series, and they came back and did some work with their own teachers in their schools” (Mary, university representative).

Pattern 3. Informal Professional Development: Opportunity to Talk and Reflect

Informal professional development activity was reported. The second quarterly report (RC-CPDT, 1992-93) documented increased interaction between preservice and inservice teachers:

Students are beginning to ask ITMs (interdisciplinary team members) questions about lesson plans, integrated instruction, and assessment. ITMs are becoming involved as mentors and peer coaches to preservice teachers and assisting them with content and practices which enhances the university students’ understanding of the teaching/learning process.
Interaction among university faculty also was reported:

Moreover, education faculty working with the faculty from the Arts & Science Division noted that interpersonal relationships have been strengthened resulting in higher quality instruction. As a result field-based instruction, according to interdisciplinary faculty is developing into a true collaborative where numerous team members participate in restructuring education into a unified endeavor of the real world (Second Quarterly, 1992-93).

Effects. Mary (university representative) shared what she perceived to be effects that the RC-CPDT had on participants. Preservice teachers were seen as “poised,” “very able to deliver instruction,” as well as “able to handle themselves very well in the classroom” (Mary, university representative). Mary elaborated that RC-CPDT preservice teachers were almost like “first-year” teachers upon entering into their student teaching experience. Mary contributes part of this success to the “increased collaboration and all the contact they have now with university faculty and mentors as opposed to what they had before.” Through increased field-based experiences, the university students have more “opportunity to talk with” professors and mentor teachers.

Mary (university representative) also shared her perception on the benefits to classroom teachers:

Classroom teachers are better informed, I think, about the teaching-learning process. And I guess, they have acquired strengths that they didn’t have before - like technology. They knew a little about all the areas, I would assume, but now those areas are becoming more included in the kinds of things they do daily. ...I also think the mentor teachers are learning from the interns and vice versa.

As for university faculty, Mary (university representative) stated, “You know, the way we teach is very different from the way we taught before.” She elaborated:

...we have more input from student, you know. It’s not like in the past - when maybe there was more lecture rather that active involvement with the students. I see that happening more and more - the students work together in groups. There’s more
higher order thinking being emphasized on our courses, in getting students to decipher themselves.

Mary contributed some of the growth experienced by university faculty to an increase in reflective learning and research:

The reflective teaching. We do a lot of that. We’re constantly working with students to reflect, and think about what they are seeing happening. You know, how do you tie theory to practice.

Reflective practice opportunity was supported by the following incerpt found in the quarterly report (1992-93):

University faculty participating in field based instruction have expressed that it has encouraged them to become more reflective and creative in their own teaching.

Mary (university representative) described role changes that she perceived to unfold due to the RC-CPDT:

Well, I think people are more involved. I think their self-esteem - teachers’ self-esteem, I think, has gone up. I think everybody feels good about what they’re doing. If you look at the social, the emotional kind of impact that it has on a group - the idea that we trust them and they trust us, and that we respect them and they respect us, I think has made a tremendous amount of difference with the mentors - you know, working together with the (university) faculty. And the students, too. There’s more professionalism among these groups.

Results of Cross-Site Data Analysis

Patterns of Vision


The Texas CPDTs in this study have grounded their initiatives in the conceptual framework of the Holmes Group Principles and John Goodlad’s Postulates. The Holmes
Group Principles (1990) and Goodlad’s Postulates (1990) called for creating a bridge between theory and practice through university/school partnerships. Gary (university representative) provided a multi-faceted description of the CPDT university/school partnerships. He described the CPDTs as supporting the restructuring aspects of “critical pedagogy” by infusing theory into practice and building “technological and social infrastructures.” Creating Professional Development Schools (Holmes Group, 1990), became an avenue for such restructuring efforts.

In order to develop and implement the Professional Development School (PDS) model, a set of common professional development needs emerged for all participants. The foundations and focus for professional development were collaboratively selected during vision building processes. All CPDTs focused on “improving teacher education, professional education, through the use of clinical experiences, primarily field-based instruction” with the purpose of developing “new professional educators” who are better prepared for 21st century schools. In order to implement such a mission, all eight CPDTs implemented and emphasized collaboration, technology integration, and increased mentoring opportunities. Sub-themes were similar across various CPDTs and included: (a) diversity issues and inclusion practices, (b) integrated curriculum and thematic instruction, and (c) learner-centered, constructivist classroom environments. Many of the highlights intersected and intermingled. For example, one respondent described a relationship that emerged that connected learner-centered classroom environments to technology integration:

I have yet to see a teacher-centered classroom that is effectively implementing technology, and I could not even tell them how to. But I’ve seen many student-
centered classrooms implementing technology effectively all over the place (Linda, school representative).

Pattern 2. Professional Development as Relationships: Breaking Barriers and Evolving Vision; The Day-to-Day Work of a PDS

Initial vision building events in the CPDTs resulted in a conceptual scaffold and opened pathways for breaking traditional barriers that previously had existed between the universities and the public schools. Diverse political agendas, differing levels of commitment, and a lack of communication were a few of the barriers to overcome. “Learning to live together” took precedence over everything else: training issues, instructional issues, technology, and staff development issues. During the initial phases of the collaborative, classroom teachers and university professors built relationships and reported “feeling comfortable” with each other for the first time. Titles such as “doctor” and “professor” were removed and universities broke the authoritative barrier of “telling the public school teachers what to do.” Equal voice was paramount for all partners.

Some of the CPDT initiatives in this study were developed to involve multi-university partnerships as well as university/school partnerships. Multi-university CPDTs presented unique patterns including breaking of traditional barriers among themselves. Multi-university collaboratives overcame entrenched skepticism of each other and began understanding each other’s uniqueness.

After barriers of communication were broken, participants began building visions together. The vision-building process was described as an “evolution.” It was an ongoing process that continuously involved creating and re-creating goals and action plans. One of the expressions that was repeated across a number of participants was, “You don’t know what you don’t know.” Another respondent described that the participants “talked the
talk" but didn’t know how to “walk the walk.” Implementation efforts initiated the actual connection between the vision and reality. In particular, conducting site visits to model PDSs were described as the “turning point” for participants in creating a realistic vision. Site visits provided a “big picture” for a model PDS “in action” and created “synergy” among the participants.

Pattern 3. Sharing and Trading: Professional Development as Partnership Tradeoff

The CPDTs initiated their collaborative efforts with retreats for vision-building and team-building. Due to state requirements for receiving CPDT funding, all planning and implementation teams had balanced governance structures representing all partners. So, from the very beginning, the CPDTs carried the “hallmark of an inclusionary model, including students, preservice teachers, inservice teachers, school administrators, and university faculty in all decision-making processes” (Gary, university representative).

University faculty, classroom teachers, and school administrators pooled their resources and shared staff development opportunities. Mendy (school representative) described this shared staff development as the “partnership tradeoff” of expertise. Collaborative decision making processes created the orchestration of a variety of professional development opportunities for a broad array of learners, also described as a “community of learners.” For example, teachers reported having more involvement with preservice interns and actively participating in redesigning university coursework. University faculty were exposed to the real world of the public schools and reported as more “updated” on current staff development trends and issues. Teachers and university faculty members joined forces and delivered staff development as a team, depending on expertise. For example, it
was common for a classroom teacher to receive training externally and return to share technology skills and applications with university faculty members and interns. On the other hand, university people tended to take the lead with sharing mentoring strategies and facilitating reflective practices. Preservice interns also shared in the process by attending staff development events with classroom mentor teachers and implementing innovations in the classroom.

The collaboration that formed within the community of learners was described as the "glue," the "thread," that continued to hold the partners together:

These are real people that I've come to know and respect professionally. This is the netting, the foundation that holds us all together. I feel that there are probably a lot of things that will stop when the money stops, but other things will never stop as long as we have this foundation of collaboration with each other and mutual respect for what the other person does (Tina, university representative).

Patterns of Enactment

Pattern 4. Common Goals, Site-Specific Applications: Translating Principles into Practice

The professional development practices in the Texas CPDTs were grounded in common purposes and a common knowledge base. But applications - professional development events and processes - were consistently adapted to the specific needs and characteristics of individual sites. "Although part of the mediational aspect of the dialogue is grounded in Goodlad's postulates, ...the over-riding principle is that you learn to ensure the autonomy of the sites and ensure that the voice of the school is paramount" (Gary, university representative). Vision building events developed common ground for participants from each entity in the partnership. Respondents described commonality in a variety of ways: "common language," "common philosophy," "common playing field,"
"common purpose," and/or "common goals." These global goals helped to focus professional development as PDS sites emerged. However, each site developed unique site-specific goals and structures.

The Texas CPDTs in this study were consistent in valuing and addressing the importance of site-specific needs. Each PDS was described as being different, and staff development opportunities varied to some degree, depending on formal and informal site-specific needs assessments. Some sites did formal surveys to identify needs. Other sites developed staff development agendas from informal meetings that occurred on site.

Similar and different staff development agendas emerged across the PDSs in the eight CPDTS. For example, all eight CPDTs chose to use some type of a "train-the-trainers" model. Most of the CPDTs selected a group of participants interested in whatever their current needs demanded; trained the individuals, and then sent them back to their respective campuses to disseminate the knowledge. One of the CPDTs chose a different method of "training trainers." They chose to pull together a heterogeneous group of participants, offered them an introductory session for a variety of computer applications, and then identified participants interested in receiving extensive training to train trainers.

Some staff development agendas were designed as open-ended opportunities where participants reported "putting the airplane together while flying." This type of agenda tended to be dependent on informal interaction and relationship building between participants. Open-ended staff development processes involved asking questions in group meetings such as, "This isn't working, how should we change it?" or, "This is working, what are we doing that is proving to be so effective?"
Pattern 5. Training: Still the One - But Not One-Shot

Training played a major role in the professional development opportunities created within each CPDT environment. Participants reported attending summer institutes, summer camps, one- and two-day retreats, workshops, inservices, and conferences filled with training sessions. Both external and internal trainers were perceived as important, with external experts most valued during initial phases of learning. Technology experts, for example, were necessary at the beginning training phases because of the limited knowledge of participants on new technology innovations. External experts were brought in to train cadres of CPDT participants. The participants returned to their respective campuses to train their peers in a “train-the-trainers” or “each one teach one” model. The purpose was to build internal capacity and become less dependent on external support. This model was used predominantly for technology training and for mentor teacher training, two areas most in need of building a knowledge base. Implementation of the train-the-trainers model had mixed reviews. Most centers reported successful follow-up when cadre members returned to their campus. However, some centers reported that cadre members did not deliver training as expected.

The training model for skill acquisition was a prevailing pattern throughout the CPDTs in this study. Technology, mentoring, and diversity training were consistent training strands for all centers. The pervasive nature of training was described as being limited to “pockets of success.”

Interaction between participants was perceived as a main avenue for professional development opportunity and change:

And that was the original vision - that the interactions at the site would cause change in the university professor - cause change in the public school teacher and administrator - cause change in the intern - and the final summary, cause change in the performance of students based on these interactions...

...It's not the individual workshops and training sessions per se that have created the professional development component of this initiative. It's change. Change in the way people do things. Change in the way they interact. Change in the way they practice their skill for the art of teaching (Joanne, school representative).

One-on-one relationship building and informal staff development were described as the “main ingredients” for overcoming barriers and difficulties involved in the partnering of diverse entities. The following synoptic view of prevailing patterns within a broader category of “Informal Professional Development” illuminate how interaction within and between participants nurtured professional development growth and ongoing learning for each CPDT's community of learners.

Pattern 6a. Revolving Door and Escalator: Diffusion of Learning by Predictable but Unplanned Interaction

The concept of a revolving door portrays one example of informal professional development in the CPDT PDSs. Learning from each other was described as a continuous ongoing cycle. For example:

...the first semester the interns ... and the public school students learn the technology together. The second semester, a new teacher comes in, a new intern comes in, and the (public school) student then teaches the intern and the new teacher... (Joanne, school representative).
The teachers learned new innovations from the university interns. The interns learned from the university faculty and classroom teachers. The progressive nature of interaction continued to revolve as new participants entered and exited. For example, a preservice intern learned a strategy for integrating technology into the curriculum from the university faculty member and shared the strategy with the third grade students and the third grade mentor teacher. The third graders and their teacher implemented the strategy and made it an ongoing learning experience. The third graders moved on to the fourth grade and shared the innovation with their new teacher and assigned intern (an “escalator effect”). The third grade teacher shared it with the new third grade students and assigned intern. The intern takes the innovation to the university faculty member and the door continues to revolve as new members enter. The constant “new arrivals” provide synergy for a constant surge of professional development needs:

And you’ve got brand new mentors jumping on board with very professionally developed mentors already in place. And it’s almost as if the new people jumping on board have to go through this developmental process. And that - part of these new people jumping on board - well, there’s a lot of synergy there that keeps us (university faculty) going and thinking. It’s like there’s always new people coming on and we’re always having to reflect and talk about what we’re doing (Larry, university representative).

Pattern 6b. The Back Door: Seeing in Action

University faculty were perceived to learn technology and innovative teaching practices by “seeing it in action.” University faculty tended to be a “challenge” in regard to training efforts, often finding their own personal agendas more important than current staff development trends and issues. However, they did respond to the “back door method” of training which naturally evolved by seeing effective innovations in action in the
classroom environment. University faculty were "inspired" to change course content in order to match teaching practices they had observed as effective. For example, technology applications being used in the schools had the most impact. By seeing a technology application in action, university faculty were more likely to see the value of integrating the application into their university instruction. The back door method occasionally inspired enough interest for some university faculty members to participate in related staff development opportunities.

"Seeing it in action" also had an impact on classroom teachers, especially if they observed a peer teacher using a unique strategy or technology application. The background of the teacher being "watched" was important. If the peer was considered to be a "regular teacher" instead of an "expert computer teacher," the peer teacher watching was more likely to implement the innovation. The phrase used to describe the peer teacher's thinking was: "Well, if she (the regular teacher) can do it, so can I."

**Pattern 6c. The Mirror: Learning through Reflection**

We believe that the responsibility for professional growth is really the individual's responsibility. ...so therefore, we have to get all of our participants into a reflective mode of what they know, what they would like to be able to know or do, and how they would like get there. ...And so we began to think, "Okay, we've got to develop a thinking, a question-raising, reflective kind of professional educator." We've got to do that by sitting around talking, figuring out ways of, you know, telling ourselves as opposed to being told (Frank, university representative).

Mentor teachers, university interns, and university faculty members participating in the CPDTs learned by reflecting on their own practices and engaging in "supportive reflection" and discussing with each other. Such metacognitive practices enhanced awareness and initiated instructional improvement. The power of reflection was discussed
in a variety of ways across all CPDTs in this study. Mentor teachers were reported as feeling more accountable for their actions because they were "being watched" and "being asked questions" by the university interns. One teacher expressed how she did not know the answer to a question asked by an intern and found herself "digging" for the answer after school that very same day. By verbalizing every day strategies, mentor teachers became better aware of their practices. Not only were they asked about "what they were doing," but also "why they were doing it." Through self-reflection and analysis, mentor teachers were perceived as improving their own practice:

I have seen more professional growth ...at the point where the teachers begin to talk about themselves more than about their intern. That’s probably worth more organized staff development than anything I can think of (Frank, university representative).

Pattern 6d. The Open Window: Ongoing Teacher Learning Through Follow-Up

Interaction between CPDT participants provided a natural setting for ongoing follow-up processes. University faculty assigned to a site provided one avenue of support, especially regarding mentoring issues. University faculty reported meeting formally and informally with classroom teachers on an ongoing basis. University faculty members shared how teachers were constantly stopping them in the hall to share information and ask questions.

Interaction between the mentor teacher and the preservice intern developed into a unique model for follow-up as both attended staff development events together and then supported each other during implementation in the classroom. One respondent referred to this as the "back-up system" because the teacher and intern "backed each other up" by having a common knowledge base.
Cadre members who had received training via a "train-the-trainers" model provided another support system at individual PDS sites. The "train-the-trainers" model was used in all eight CPDTs in this study. Reports of effective implementation were inconsistent. Some CPDTs reported that extensive follow-up training occurred using this model. Cadre members became the expert at each respective PDS site. Cadre experts held training sessions after school and during planning periods for PDS participants. Cadre experts were also available for ongoing trouble-shooting, especially in regard to technology support.

Other CPDTs reported that follow-up did not occur with the "train-the-trainers" model due to a variety of interfering factors. For example, technology cadre members were in such high demand that they could not address the needs of the school and continue to teach a classroom of students. Pulling these teachers from their classrooms was difficult and was not always met with support from the building principal. In large collaboratives with many participating schools, monitoring and following through on expectations of cadre members was difficult. Respondents reported that cadre members tended to use the training in their own classrooms, not disseminating information as desired.

Technology provided ongoing follow-up and support through various telecommunications. Distance learning facilities with two-way video and audio were installed in some CPDTs with the intent to facilitate field-based instruction by connecting the universities to the schools. Successful implementation was reported where university faculty held teleconferences with school participants. Course instruction and staff
development was reported as occurring via distance learning as well. However, consistent opinions of respondents revealed that the distance learning facilities were not being used to the envisioned capacity.

Data links between the schools and universities provided an avenue for follow-up. Using e-mail was reported as popular among participants and enhanced opportunities for collaboration. One CPDT described a unique project that used widespread cable television access to deliver staff development across multiple school districts and into the homes of the community. Recipients were able to videotape the sessions and use the tapes for review and follow-up. This method was reported as effective for teaching technology skills that require repetitive practice to learn.

Pattern 6e. Behind the Screen: One-on-One Technology Training for University Faculty

Training university faculty tended to take on a different flavor of staff development. They were reported to favor one-on-one attention rather than participate in large group activity especially during technology training efforts. Respondents did not report the one-on-one attention as an efficient model. University faculty were described as the most “challenging” participants for training purposes. One respondent referred to the one-on-one attention as an “inefficient mode of crisis management.”

Patterns of Effects

Pattern 7. Teachers: From “Just a Teacher” to Leaders, Mentors, Staff Developers, Collaborators, Tech Users, and Researchers

I think I used to think of myself as just a teacher and there is not a bone in my body that says that anymore (Mendy, school representative).
Teachers reported a variety of personal and professional effects due to their involvement with the CPDT. Role changes and increased responsibilities resulted in increased feelings of teacher empowerment. Teachers emerged as leaders who had not previously been in leadership roles. Not only did they attend staff development opportunities, but they also developed expertise and became deliverers of staff development. Teachers described opportunities in which they presented with university faculty at national and local conferences. Some teachers conducted research and published articles with university faculty. Some teachers described specific grant proposals that they had written. All of these events led to teachers feeling more professional. "They're treated more like professionals and feel more like experts" (Mendy, school representative). Teacher's input was requested, respected, and valued:

The feel that they have some control; that they have input; that their opinions, their skills, their knowledge are valued and are important (Kay, university representative).

Teachers were reported as being "more invested in the profession." Their active involvement in mentoring preservice interns shed a new sense of responsibility to the profession. A couple teachers described this investment as follows:

...but you also feel a real part of the profession. And one of the things about being a mentor - we could never gripe about student teachers not being prepared again if we are not willing to help prepare them. ...It's an investment (Dawn school representation).

The personal plus for me doing this - is just having a contribution to the field in general. I think we all want to think that we've positively had an effect (Julie, school representative).
Teachers experienced effects of collaboration and found themselves opening up their classroom doors to discover new ways of sharing that led to feelings of empowerment and less isolation:

And when you share with other teachers and with the students, it really lends credibility to what your job is...

...I don’t feel isolated anymore, you know? I don’t feel like I’m in my classroom all day long, and no one else knows what I do, except me. I really like being able to share what’s happening in the classroom (Jeanna, school representative).

Teachers also benefited from the CPDT’s technology component. Not only did they have access to more technology, such as multimedia and telecommunications, but they also described how they implemented the technologies into their classroom curriculum. For example, teachers from the CEDE collaborative shared how they learned to use multimedia with their fourth grade students by integrating the use of HyperStudio into a “meaningful” research project. Teachers from the SWT-CPDT shared, “We would not have gotten involved with technology had it not been for the PDC (CPDT).” Their PDS was a demonstration site for technology integration and the respondents shared how they now used “computers as a tool on a daily basis.”

**Pattern 8. University Faculty: Connections, Collaboration, and Culture Wars**

University faculty were effected by role changes that evolved through increased involvement on public school campuses. By coming out of the scholarly closet and into the living room of public visibility, they discovered real world differences that impacted instructional content:

The most important thing was that they (university faculty) would now be - the word that comes to my mind is - public. That there were no more hiding places. ...So many of them have been isolated from the community - the needs of the community -
for twenty years... You have people that have been teaching ed. psych or history from those yellow notepads for fifteen to twenty years. And they don’t even know what’s going on in the schools. And so that was the biggest challenge. ...the university professor has not been at a cultural level which has much input from the community (Lisa, university representative).

Well, as for role changes (for university faculty) - a major one was, in fact, that a re-look at modern day classrooms was going to be a culture shock to the university professors who really had been talking education but hadn’t really seen it. And so that was going to be sort of a revolution to open up the minds of faculty members to recognize that teaching in schools is a very tough, tough job...

...Another role change was that they were going to have to of their content and be able to answer questions like, “Is this content relevant? Is it valid? Is it appropriate to deliver in this kind of program, or should it be delivered somewhere else?” And so everybody participating had to look at their content this way (Frank, university representative).

Through collaborative team-teaching and observation, university faculty began redesigning course content based on real-world relevancy. Breaking barriers of “old pedagogical delivery systems” became part of the process for creating field-based teacher education programs, as Lisa (university representative) explains:

It was the old pedagogical delivery system. We’re going to take this out there, and we’re going to show these people. We’re going to bring in four experts and we’re going to show these people how it’s done, and then tell them they have to do it. ...The PDS model says, “My name is Lisa. I teach at the university and I would like to come and sit in your classroom and learn what you’re doing.”

University faculty members became effective observers, listeners, and supporters for PDSs participants. Larry (university representative) described his new role as a facilitator of “supportive reflection” for both preservice and inservice teachers. Shiela (university representative) described how she was the initiator for building one-on-one relationships with classroom teachers. Lisa (university representative) summarized the university role
as being built around a “listening model,” in which the university people learned to “listen” to the school people.

The PDS environment provided opportunities for university faculty participants to collaborate and update themselves on current staff development issues:

Many of the public school teachers had had training in a lot of areas that we (university professors) had not had opportunities to receive training in. So, part of our site-specific plan was to make sure that we were able to get those experiences. This has provided an opportunity for us to feel more comfortable in the public school setting (Molly, university representative).

University faculty participants also benefited from collaborating with other university faculty members as illuminated in multi-university collaboratives:

Personally, for me, it (professional growth) has been the collaboration with the people at the other institutions. I mean, I just believe very strongly in that. And in fact, I've been hesitant to write or do presentations on my own because I feel everybody should be involved (Jill, university representative).

Connecting with the public schools and learning new dimensions of collaboration caused dilemmas for university faculty. They reported the struggles of taking on the task of developing PDSs while trying to simultaneously hold their status as a tenure-track faculty member. Many university faculty voiced the dilemma of “publication” vs. demands of a PDS (time and energy). The university culture and its reward system and the public school culture and its needs for creating PDSs evolved into “culture wars” for university faculty members:

I think, personally and professionally, they (university faculty) find this very fulfilling, very satisfying; they see real changes in our students and in the children too... But, I also think they find it very frustrating because it's hard work. It takes time to work collaboratively. I think sometimes they're frustrated because the traditional reward system doesn't know how to handle something like this. There's not as much time to publish and do the traditional university things (Kay, university representative).
They (university professors) like it a lot. They like the team teaching. They like the planning together. But, they are frustrated because this really takes a lot of work, a lot of time and a lot of work. They are out on the campuses from eight in the morning to four in the afternoon, two whole days a week. If you can imagine. And then, most all of them teach another course on campus, maybe a graduate course or something. The time to do their research and writing is so difficult for them and they are tired (Jan, university representative).

Pattern 9. Interns: Classroom-Ready, Confident, Collaborative, Reflective, More Student-Centered, More Technologically Capable

University interns were a primary target for professional development and growth. They reaped the benefits of the PDS model in many ways. Respondents reported that interns were more confident, more comfortable in the classroom setting, and better prepared for their first year of teaching. They exited the program "classroom-ready" and "able to begin working effectively immediately" (Joanne, school representative):

The preservice teachers are very different. That’s all I can tell you. They’re different from the one’s that went through the traditional program. When they go to student teaching, they’re almost like first-year teachers. And they’re able to handle themselves very well in the classroom. They’re very poised. They’re very able to deliver instruction. They’re very much familiar with the teaching-learning process (Mary, university representative).

The PDS experience provided the university intern with exposure to a diverse repertoire of teaching strategies. Jill (university representative) describes the intern as becoming more of a “connoisseur”:

They’re better prepared. They’re more confident. They’re open. They know what to look for. They don’t just become a clone of whatever teacher they’re with because they’ve been with several. ...they become a little bit more of a connoisseur. They pick and choose and select.

Their improved “menu” has provided more experience with technology; more experience with student-centered classroom environments; more experience with inner-city school environments. “I think one thing that most of our (university) students are getting is
experience with the diversity of children in classrooms - multicultural diversity and
linguistic diversity” (Kay, university representative).

The interns are in the schools more and have more opportunities to reflect and grow
through contact time with university faculty and classroom teachers:

They (interns) are spending more time in the schools and our (university) faculty out
in the schools are spending more time with them (interns) (Robert, university
representative).

The length of time that (university) students are out there; the fact that the
university’s faculty are more involved in what the (university) students are doing out
there in the schools; and the fact that public school people - principals and teachers -
are more involved in planning those experiences for our (university) students, all
contribute to a better prepared (university) student (Kay, university representative).

Pattern 10. Students: Pride, Attention, Connection, and Community

We (public school participants) learn from the university and the university learns
from us. It’s really a transformational kind of thing. I see it (the collaborative) as
having a dual purpose; the creation of professional development schools ultimately
changing the course of teacher education, but at the same time, enriching the
experiences for students in our schools (Janet, school representative).

K-12 students benefited from the eight CPDT restructuring efforts. Having access to
new technologies in combination with an emphasis on student-centered learning, provided
many new learning opportunities. Students were reported as using the computer to work
collaboratively and make decisions. SWT-CPDT described a study in which CPDT K-12
students were compared with non-CPDT students in using computers to conduct a
research project. CPDT K-12 students were reported to use the computer much more
effectively, and less randomly, than non-CPDT students (Sara, school representative).

Learning computer skills also built confidence levels in students. CEDE reported
how a group of high school students were given the opportunity to show university faculty
members how to use a presentation software tool (Lisa, university representative). The unique part of this story is that the high school students were described as "being from the street" and "sleeping under bridges." The empowerment they experienced from this event was "dynamic."

K-12 students were considered as part of the revolving door process in that they developed expertise and became staff developers for interns, teachers, and university faculty participants:

...the first semester the interns and the reading clinic students and the public school students learn the technology together. The second semester, a new teacher comes in, a new intern come in, the (public school) student teaches the intern and the new teacher. So, our students, we think, have developed staff development (Joanne, school representative).

K-12 students were described as developing a sense of "pride" from their new accomplishments, which was accented through sharing with others:

I also feel like it's given us a lot of pride in what we do because we are so much in the focal point. You know, we have visitors all the time that want to walk through our classrooms and want to see what we're doing. And, I think it gives the kids that feeling, too, knowing that anything they do, any project they do, someone's going to look at it and comment on it (Jeanna, school representative).

Another effect that was reported for K-12 students was the advantages of increased attention from having more adults present in the classroom:

The one's that actually benefit the most are the children because it's the mentor teachers in concert - or in tandem - with the preservice teachers that are getting things produced and done for the children in the classroom (Larry, university representative).

I think probably for most of the children it's been a positive experience. ...And I guess it just kind of intuitively makes sense to me that if you have more adults in a setting, then children have more access to adults to guide and help and all those kinds of things (Kay, university representative).
Pattern 11. Increased Dialogue and Involvement: Changes in Roles and Relationships

All eight CPDTs reported increased dialogue between the schools and the universities. Individual respondents described this “networking” between participants as previously being very limited. The conversation between the universities and the schools was described as “much different than the conversation that used to go on between schools and universities” (Gary, university representative). Various aspects mediated this dialogue. For example, the emphasis on technology and collaboration, as written in the CPDT rule from the state funding agency, became a part of the dialogue. The performance indicators and their emphasis on student-centered classrooms and inclusive models of multi-culturalism became part of the dialogue.

The collaborative nature of the CPDTs not only resulted in increased dialogue, but also demanded increased involvement of participants in each other’s worlds. This increased level of involvement resulted in various changes in individual roles and responsibilities. A “shift in responsibilities” was described between the classroom teacher and the university faculty member. The classroom teacher “helps with our preservice teachers and we (university faculty) are helping them with their staff development” (Teresa, university representative). Classroom teachers were reported as more involved in preservice teacher education through increased mentoring and modeling. They also worked with university faculty to redesign university coursework. Classroom teachers also were reported as experiencing increased professional activity through attending and presenting at conferences, attending and delivering staff development, conducting research, publishing articles, and writing grant proposals.
University faculty role changes surfaced from having more involvement with the public school environment. They were reported as being more collaborative, as evidenced by new approaches to team-teaching. They teamed with each other and with classroom teachers to redesign university course content and to make the course content more relevant to the real world environment. Lisa (university representative) summarized the university role as being built around a “listening model,” in which the university people learned to “listen” to the school people. The listening model provided the opportunity for dialogue and an avenue for autonomy. Each PDS site was given the freedom of being heard and of identifying their own needs. Learning to listen meant learning to accept individual PDS needs concerning pace and progress, even when pace and progress was not consistent with university faculty expectations.

Increased dialogue and involvement resulted in breaking down barriers of isolation. The collaborative efforts of the eight CPDTs led to participants feeling less isolated. Classroom teachers were reported as “opening classroom doors” for the first time in years. University faculty members were reported as coming out of their “ivory towers” and building relationships in the public school environment. Rural PDS administrators, teachers, and K-12 student were connected to the outside world for the first time via telecommunications networking. Elizabeth (school representative) described how increased dialogue through telecommunications has effected feelings of isolation in a rural community:

I have to believe that the biggest effect has been - the one guiding thing that got us involved to begin with ... is the fact that we wanted to break out of the isolation that we were experiencing. The isolation is not just distance around here, but the isolation is also attitude. The isolation is very different in a rural environment and it’s easy not
only to have your kids become isolated, but also to have your teachers become isolated. They feel like they can do their thing and whatever little difference it would make. So, they lower their expectations. I think that the use of technology has made it all open up like flowers. The telecommunications has broken down old walls of isolation. We’re raising our expectations as professionals and raising our expectations for our students. Even parents are expecting more from us now.

Pattern 12. Technology Toys: Carrots and Conundrums

The focus on technology in the eight CPDTs had unique effects on participant’s professional development. Technology was described as the “carrot” that encouraged participation across entities. The attraction of the “big toys” was a motivating force, as well as an interfering force:

I think a lot of us have been maybe swayed by the attraction of the big toys called technology. I think that steered us more than it should have. Just getting our hands on the toys provided by this grant and then figuring out what to do with them, as opposed to figuring out what to do and then going and getting the toys... (Gina, university representative).

The “big toys” created a series of conundrums; a series of “intricate and difficult problems” (Merriam-Webster, 1977, p. 248). These conundrums became interfering factors for implementing effective staff development. The complexities of purchasing and installing equipment delayed practical training efforts:

The pragmatics of the situation were that the first year, almost without exception, we tried to work out how we were going to collaborate and how we were going to get technology into the classrooms. Given that, there was very little room for looking at applications and performance indicators. A fairly realistic view emerged immediately that it was going to take a long time to get things in place before we could even start addressing the idea in terms of the vision (Gary, university representative).

Respondents voiced frustration with timelines and support issues. The technologies advanced faster than the initiative could implement. Technology training content kept increasing and trainees became overwhelmed. One trainer expressed how she finally
realized that "less is more." Instead of introducing as many skills as possible in a training session, she effectively concentrated on one or two skills over the entire semester.

Despite the challenges, technology awareness and implementation was reported to increase across all eight CPDTs for both university and school entities. The technology "carrot" provided new opportunities for many participants. Mari (school representative) shares her experience:

Yeah! Yeah! I would have never done it (participate in the CPDT) without the technology. I mean, I probably would have been the same old person. I didn’t realize that, you know, my attitude was, "Oh, it goes around in circles. It’s just going to come back. It’s just a new fangled thing." But this was like all of a sudden we had money to do things - we had - I had technology. ...And then all of a sudden, I’m doing it!

Pattern 13. The Demands of Institutionalization: The Miracle vs. Templeton the Rat

Respondents predicted that institutionalizing the CPDT initiatives would negatively impact the professional development and growth of the participants. Institutionalizing means expansion. Expansion issues raised concern for quality control. Comments such as, "we’re getting so big that we’re splitting apart" and "66 schools is too many," were indicators of this concern. Kathleen (school representative) summarized the issue of quality control as follows:

We need to protect the quality of the program. ...If you want people to respect education, they have to see quality. And what they see right now is that we’re still doing the Target, Walmart, Kmart quantity thing. ...We ought to be the front leaders in being able to say that we’re going to protect it so that means we’re going to have to have more money. If we don’t have the money then we’re going to have to say to students, “I cannot put you in this program. You’re going to have to go on a waiting list or another university.” You’ve got to draw a line.

Institutionalizing means a shift from "voluntary participants" to "reluctant participants" (Frank, university representative). This shift was perceived as contributing
to "a real danger of sabotage" at the university level. "University faculty members who are determined it won't work, don't like it, didn't like, never volunteered to begin with, who fought it from the beginning, and who are now expected to participate," will become very "reluctant participants" (Frank, university representative). This was predicted to threaten the quality of the program as well. The "Templeton the Rat" notion of "what's in this for me" could threaten the "miracle" of collaboration that has formed the foundation of the CPDT initiative.

In discussing the involvement of university faculty, the subject of tenure vs. non-tenured university faculty was illuminated. Time necessary for PDS collaboration in addition to pressure for conducting and publishing research to receive tenure was a factor against institutionalization and forcing involvement of all university faculty in PDS activity:

Our assistant professors cannot take a risk on the PDSs for research because the research is not quick. It's not something that you can grab your data in six weeks and run with. They can't afford to do it because of the time factor. They have to spend their time writing (Allen, university representative).

Another issue discussed involving the institutionalizing of the eight CPDTs in this study deals with leadership issues. Leadership from the top was identified as critical to the successful implementation of the PDS model. "The top" was characterized in a variety of settings and included: (a) the principal of a school, (b) the administration from the school district office, and (c) the administration at the university level. Visionary building principals were reported as providing an atmosphere characterized as "fertile ground" for a PDS. Without the principal's support in a building, commitment to the PDS initiative was limited. This support was also necessary at the district office level. In particular, two
CPDTs shared how a change in the district level superintendent effected the forward seeking focus of the district, consequently effecting the implementation of individual PDSs in each respective district. Top administrators at the university also were reported as having significant political influence on the implementation of the CPDT initiative.
CHAPTER V

INTERPRETATIONS AND CONCLUSIONS

The purpose of this study was to describe and analyze three major components of professional development as experienced within the Texas Centers for Professional Development and Technology (CPDTs). The three components were (a) visions of professional development reform, (b) the patterns of enacted professional development models, and (c) the effects of these models as understood by policymakers, implementors, and practitioners. A second objective of this study was to extend the data to inferred implications for current professional development efforts.

I posed three questions to address various facets of professional development as perceived by the respondents. The research questions addressed: (a) unique patterns of vision of professional development reform in the Texas CPDTs, (b) unique patterns of professional development as enacted in Texas CPDTs, and (c) unique patterns of effects of professional development programs on target groups in Texas CPDTs.

This study used qualitative data collection and analysis procedures. Raw data were collected in the form of individual interviews, focus group interviews, documentation, and fieldnotes. Data collection and analysis processes ran parallel to each other and were informed by each other, with data collection dominating in the earlier phases and data analysis dominating in later phases (Tesch, 1990). Data analysis followed a constant comparative method of developing grounded theory (Bogdan & Biklan, 1992, Patton, 358
1990; Straus & Corbin, 1990; Glaser & Strauss, 1967). This process of iterative data aggregation, reduction, and analysis resulted in the development of two matrices. The first set of matrices represented the themes and categories that emerged at each CPDT from the data collection procedures (Appendix F). Individual interviews, focus group interviews, field notes, and documentation for each CPDT under study were analyzed according to the three research questions addressing vision, enactment, and effects. This set of matrices also displayed the data according to the functional role of the respondent. Functional roles were broken into three categories: (a) university representative, (b) school representative, and (c) regional service center representative. By only using three categories, I was better able to ensure anonymity of respondent. The second set of matrices displayed cross-site categories and themes that emerged (Appendix G). This cross-site analysis illuminated patterns of vision, enactment, and effects that were common across all eight CPDTs under study.

Unique patterns of vision included four main categories: (a) participants developed an understanding of a common mission as identified through current literature on university/school partnerships (Holmes Group, 1990; Goodlad, 1990); (b) participants across partnering entities experienced the breaking of barriers that had long existed between them; (c) participants experienced the vision as an evolving process that was continuously revisited and revised during implementation phases; and (d) participants perceived the vision of professional development as a one of a partnership tradeoff, a sharing of expertise. Unique patterns of enactment included three main categories: (a) professional development was site specific, supporting PDS autonomy; (b) professional
development opportunities were provided through a training model using both external and internal facilitators; and (c) informal professional development opportunities were provided through various relationship-building processes. Unique patterns of effects were described for teachers, university faculty, interns, and K-12 students. Additional patterns of effects included: (a) the increased dialogue between all participants, (b) the motivational and challenging effects of technology, and (c) the potential dilemmas of institutionalization of the PDS model.

This examination of the informant's perception of professional development within the Texas CPDTs revealed the following eighteen themes (13, one of which had 5 sub-patterns):

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<td>7. Teachers: From &quot;Just a Teacher&quot; to Leaders, Mentors, Staff Developers, Collaborators, Tech Users, and Researchers</td>
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This chapter will discuss these themes and is divided into three sections. The first section presents a summary of the components of professional development as illustrated through the eighteen themes. The second section discusses and interprets these findings, and the third section draws implications for policy, practice, theory, and research.

Patterns of Vision


The Texas CPDTs in this study grounded their initiatives in the conceptual framework of the Holmes Group Principles (1990) and John Goodlad’s Postulates (1990) which call for creating a bridge between theory and practice through university/school partnerships. The Task Force on Professional Development Schools (1996) reported that Professional Development Schools (PDSs) are similar because they “share an allegiance to the Holmes Group Principles or support Goodlad’s vision for simultaneous renewal of schools and teacher preparation programs.” The Holmes Group (1990), in particular, emphasized the creation of PDSs.

To develop and implement the Professional Development School (PDS) model, common professional development needs for all participants were collaboratively selected during vision building processes. All CPDTs focused on “improving teacher education, professional education, through the use of clinical experiences, primarily field-based
instruction” with the purpose of developing “new professional educators” who are better prepared for 21st century schools. All eight CPDTs emphasized collaboration, technology integration, and increased mentoring opportunities. Sub-themes related to a common vision of professional development across various CPDTs included: (a) diversity issues and inclusion practices; (b) integrated curriculum and thematic instruction; and (c) learner-centered, constructivist classroom environments.


Initial vision-building events in the CPDTs resulted in opening pathways and breaking traditional barriers that previously had existed between the universities and the public schools. Diverse political agendas, differing levels of commitment, and a lack of communication were a few of the barriers to overcome. “Learning to live together” took precedence over everything else: training issues, instructional issues, technology, and staff development issues. Classroom teachers and university professors built relationships and reported “feeling comfortable” with each other for the first time. Titles such as “doctor” and “professor” were removed and universities broke the authoritative barrier of “telling the public school teachers what to do.” Equal voice was paramount for all partners.

Goodlad (1995, p. 13) described a similar process that unfolded with the Brigham Young University-school district partnership. This partnership “recognized from the beginning the symbiotic principle of unlike institutions, each with part of an important agenda, needing the other to forward it successfully.” Ponticell, Button, Johnson, Cates, and Ferguson (1994) reported the need to break the barriers of “we-they” views of universities and schools, and support the PDS concept as a potential avenue. They also
discussed the difficulties of such collaborative efforts. Cone and Hardy (cited in Ponticell, Button, Johnson, Cates, and Ferguson, 1994, p. 2) cautioned, "...teachers and university faculty generally have vague and inaccurate images of each other and each other's activities." Snyder (cited in Darling-Hammond, 1994, p. 17) described the "we-they" view as follows:

I see the "SIP," the school improvement program model in which universities go out to improve schools, and the "flip-SIP," the inverse SIP in which school practitioners see the university as the defective partner, as precursors to a third model - the PDS. Unlike the SIP or flip-SIP where the goal is for one party to change the other, the PDS is based on a realization that all of the participating experts must together invent a new system that is built upon the knowledge of all parties.

Ponticell, Button, Johnson, Cates, and Ferguson (1994, p. 2) elaborate that "both the concept and structure of a PDS evolve during day-to-day work of university and school faculties in a particular PDS site." The PDS vision is built from the "events and actions that occur and their effects."

The CPDTs in this study supported the notion of an "emerging" vision. The vision was not perceived to take root immediately. Instead, the kernel of the vision evolved over time. Participants reported better understanding of their vision after implementation unfolded. For example, participation in site visits to PDSs provided participants with the "big picture". When participants returned from the site visits, they engaged in developing a vision they understood. Allen Glenn (1995), in a report on the university/school partnerships at the University of Washington, discussed a similar process in their renewal efforts:

It was a shared vision, held by a few people in the beginning but by the majority at the end, that kept us going. It was a vision that was refined again and again...
Some of the CPDT initiatives in this study were developed to involve multi-university partnerships as well as university/school partnerships. Multi-university CPDTs presented unique patterns including breaking of traditional barriers among themselves. Multi-university collaboratives overcame entrenched skepticism of each other and began understanding each other's uniqueness.

**Pattern 3. Sharing and Trading: Professional Development as Partnership Tradeoff**

The CPDTs initiated their collaborative efforts with retreats for vision-building and team-building. Due to state requirements for receiving CPDT funding, all planning and implementation teams were to have balanced governance structures representing the schools and the university. So, from the very beginning, an inclusionary model for professional development and growth was implemented. University faculty, classroom teachers, and school administrators created a vision to pool their resources and share in attending and delivering staff development opportunities. Mendy (school representative) described shared staff development as the "partnership tradeoff" of expertise. Collaborative decision-making processes created the orchestration of a variety of professional development opportunities for a broad array of learners, also described as a "community of learners":

Students, teachers, administrators, staff, parents, and the community-at-large are partners in the pursuit of knowledge, understanding, and wisdom. A learning community is dedicated to educating the whole person - intellectual, spiritual, physical, and emotional essence (Task Force on Professional Development Schools, 1996).

Teachers reported having more involvement with preservice interns and were active participants in redesigning university coursework. University faculty were exposed to the
real world of the public schools and became "updated" on current staff development
trends and issues. Teachers and university faculty members joined forces and delivered
staff development as a team, depending on expertise. For example, it was common for a
classroom teacher to receive training externally and return to share technology skills and
applications with university faculty members and interns. On the other hand, university
people tended to take the lead with sharing mentoring strategies and reflective practices.
Preservice interns also shared professional development by attending staff development
events with classroom mentor teachers and implementing innovations in the classroom.

The dynamic interplay of sharing and trading between partners is supported in current
literature. Darling-Hammond (1994, p.10) states that PDSs create new ways of learning
by "integrating the work of teachers and teacher educators, of schools and universities, of
teachers as researchers and researchers as teachers." She further elaborates, "One of the
most striking features of current PDSs is their emphasis on collaboration - via shared
decision-making in teams within schools and between schools and universities, team
teaching within both the schools and universities, and collaborative research among
teachers, student teachers, and teacher educators." Ponticell, Button, Johnson, Cates, and
Ferguson (1994, p. 3) discuss the joining of "scholarly" and "applied" agendas for creating
"mutual inquiry" that benefits both university faculty and classroom teachers. Information
must be shared and renewal needs to be a shared vision (Glenn, 1995).
Patterns of Enactment

**Pattern 4. Common Goals, Site-Specific Applications: Translating Principles into Practice**

The professional development practices in the Texas CPDTs were grounded in common purposes and a common knowledge base. But, applications - professional development events and processes - were consistently adapted to the specific needs and characteristics of individual sites. Vision building events developed common ground for participants from each entity in the partnership. Respondents described commonality in a variety of ways: “common language,” “common philosophy,” “common playing field,” “common purpose,” and/or “common goals.” These global goals helped to focus professional development as PDS sites emerged. However, each site developed unique site-specific goals and structures.

The focus on meeting site-specific needs is congruent with the current emphases on site-based management strategies. Ponticell, Button, Johnson, Cates, and Ferguson (1994) support that university/school collaboration has strengthened the site-based decision-making processes at the schools.

**Pattern 5. Training: Still the One - But Not One-Shot.**

Training played a major role in the professional development opportunities created within each CPDT environment. Participants reported attending summer institutes, one-to-two day retreats, workshops, inservices, and conferences filled with training sessions. Both external and internal trainers were perceived as important, with external experts most valued during initial phases of learning. Technology experts, for example, were necessary at the beginning training phases because of the limited knowledge of participants on new
technology innovations. External experts were brought in to train cadres of CPDT participants. The participants returned to their respective campuses to train their peers in a “train-the-trainers” or “each one teach one” model. The purpose was to build internal capacity and become less dependent on external support. This model was used predominantly for technology training and for mentor teacher training, two areas most in need of building a knowledge base. Implementation of the train-the-trainers model had mixed reviews. Most of the CPDTs reported successful follow-up when cadre members returned to their campus. However, some CPDTs reported that cadre members did not deliver training as expected.

The training model for skill acquisition was a prevailing pattern throughout the CPDTs in this study. Sykes (1996, p. 467) states that the training model “will continue to enjoy a solid place within the professional development mix.” He specifically describes elements such as “summer institutes, one- or two-day retreats, and after-school meetings.” But, Sykes (1996, p. 465) also reiterates the ineffectiveness of “one-shot workshops” which have become known as “shorthand for superficial, faddish inservice education that supports a mini-industry of consultants without having much effect on what goes on in schools and classrooms.” He further emphasizes the need for ongoing teacher learning. The CPDTs in this study support this notion of ongoing teacher learning, as illuminated in the upcoming patterns.


Sykes (1996, p. 467) discusses the need to replace the overtones of the current training model by a “professional development stance of inquiry that is better suited to the
uncertainties of changing practice.” Reform efforts such as the Texas CPDT initiative, magnify uncertainties as innovations become part of the daily lives of the CPDT participants. Sykes elaborated that professional development opportunities that “embrace the uncertainties” of change efforts need to include “dialogue and critique” as participants engage in “invention, trial, exploration, and discovery.” The following synoptic view of prevailing patterns within a broader category of “Informal Professional Development” illuminate how interaction within and between participants nurtured professional development growth and ongoing learning for each CPDT’s community of learners.

Pattern 6a. Revolving Door and Escalator: Diffusion of Learning by Predictable but Unplanned Interaction.

The concept of a revolving door portrays one example of informal professional development in the CPDT PDSs. Learning from each other was described as a continuous ongoing cycle. For example:

...the first semester the interns ... and the public school students learn the technology together. The second semester, a new teacher comes in, a new intern comes in, and the (public school) student then teaches the intern and the new teacher... (Joanne, school representative).

The teachers learned new innovations from the university interns. The interns learned from the university faculty and classroom teachers. The progressive nature of interaction continued to revolve as new participants entered and exited. For example, a preservice intern learned a strategy for integrating technology into the curriculum from the university faculty member and shared the strategy with the third grade students and the third grade mentor teacher. The third graders and their teacher implemented the strategy and made it an ongoing learning experience. The third graders moved on to the fourth grade and
shared the innovation with their new teacher and assigned intern (an "escalator effect").

The third grade teacher shared it with the new third grade students and assigned intern.

The intern takes the innovation to the university faculty member and the door continues to revolve as new members enter. The constant "new arrivals" provide synergy for a constant surge of professional development needs:

And you've got brand new mentors jumping on board with very professionally developed mentors already in place. And it's almost as if the new people jumping on board have to go through this developmental process. And that - part of these new people jumping on board - well, there's a lot of synergy there that keeps us (university faculty) going and thinking. It's like there's always new people coming on and we're always having to reflect and talk about what we're doing (Larry, university representative).

**Pattern 6b. The Back Door: Seeing in Action.**

University faculty were perceived to learn technology and innovative teaching practices by "seeing it in action." University faculty tended to be a "challenge" in regard to training efforts, often finding their own personal agendas more important than current staff development trends and issues. However, they did respond to the "back door method" of training which naturally evolved by seeing effective innovations in action in the classroom environment. University faculty were "inspired" to change course content in order to match teaching practices they had observed as effective. For example, technology applications being used in the schools had the most impact. By seeing a technology application in action, university faculty were more likely to see the value of integrating the application into their university instruction. The back door method occasionally inspired enough interest for some university faculty members to participate in related staff development opportunities.
“Seeing it in action” also had an impact on classroom teachers, especially if they observed a peer teacher using a unique strategy or technology application. The background of the teacher being “watched” was important. If the peer was considered to be a “regular teacher” instead of an “expert computer teacher,” the peer teacher watching was more likely to implement the innovation. The phrase used to describe the peer teacher’s thinking was: “Well, if she (the regular teacher) can do it, so can I.”

Pattern 6c. The Mirror: Learning through Reflection.

Mentor teachers, university interns, and university faculty members participating in the CPDTs learned by reflecting on their own practices and engaging in “supportive reflection” and discussing with each other. Such metacognitive practices enhanced awareness and initiated instructional improvement. The power of reflection was discussed in a variety of ways across all CPDTs in this study. Mentor teachers were reported as feeling more accountable for their actions because they were “being watched” and “being asked questions” by the university interns. One teacher expressed how she did not know the answer to a question asked by an intern and found herself “digging” for the answer after school that very same day. By verbalizing every day strategies, mentor teachers became better aware of their practices. Not only were they asked about “what they were doing,” but also, “why they were doing it.” Through self-reflection and analysis, mentor teachers were perceived as improving their own practice:

I have seen more professional growth ... at the point where the teachers begin to talk about themselves more than about their intern. That’s probably worth more organized staff development than anything I can think of (Frank, university representative).
"Reflective practice" is an emerging term in professional development school contexts. Ponticell, Button, Johnson, Cates, and Ferguson (1994, p. 2) address the PDS concept as a "call to action regarding collaborative reflection, research, and innovation."
The Task Force on Professional Development Schools (1996, p. 11) contribute a section of their report on "inquiry and reflection" stating that these concepts are common beliefs shared by PDSs and supported by the Holmes Group Principles and Goodlad's Postulates. Sykes (1996, p. 467) attributes a dual agenda to the "professional terrain," stating that professional development opportunities need to not only encompass the transmission of knowledge and skills, but also provide the opportunity for "feedback and dialogue", as characterized by a "reflective or inquiring mode." Gary Fenstermacher (cited in Darling-Hammond, 1994, p.6) describes reflection as a required new investment in teacher learning:

In a time when so many advocate for restructured schools, for greater decision autonomy for teachers, and for connecting the schools more intimately with homes and communities, it is more important than ever that teachers have the capacity to appraise their actions, evaluate their work, anticipate and control consequences, incorporate new theory and research into practice, and possess the skills and understanding needed to explain their work to other teachers, and to students and their parents.

These reflective capacities are not innate to human beings, nor are they acquired quickly. They are not acquired during a planning period sandwiched somewhere in between classes, or during evening mini courses after a full day's work. They are, rather, the outcome of sustained and rigorous study, and of dialogue and exchange with master teacher educators.

Pattern 6c. The Open Window: Ongoing Teacher Learning Through Follow-up.

Interaction between CPDT participants provided a natural setting for ongoing follow-up processes. University faculty assigned to a site became one avenue of support,
especially regarding mentoring issues. University faculty reported meeting formally and
informally with classroom teachers on an ongoing basis. One university faculty member
shared how teachers were constantly stopping him in the hall to share information and ask
questions.

Interaction between the mentor teacher and the preservice intern developed into a
unique model for follow-up as both attended staff development events together and then
supported each other during classroom implementation. One respondent referred to this
as the "back-up system." The teacher and intern back each other up by having a common
knowledge base as provided by staff development opportunities.

Cadre members who had received training via a "train-the-trainers" model provided
another support system at individual PDS sites. The "train-the-trainers" model was used
in all eight CPDTs in this study. Effective implementation of the model was not
consistently reported. Some CPDTs reported that extensive training occurred using this
model. Cadre members became the expert at each respective PDS site. Cadre experts held
training sessions after school and during planning periods for PDS participants. Cadre
experts were also available for ongoing trouble-shooting, especially in regard to
technology support.

Other CPDTs reported that follow-up did not occur with the train-the-trainer’s model
due to a variety of interfering factors. For example, technology cadre members were in
such high demand that they could not address the needs of the school and continue to
teach a classroom of students. In large collaboratives with many of schools, monitoring
and following through with cadre member expectations was difficult. Respondents
reported that cadre members tended to use the training in their own classrooms, not disseminating information as desired.

Technology provided ongoing follow-up and support through various telecommunications. Distance learning facilities with two-way video and audio were installed in some CPDTs with the intent to facilitate field-based instruction by connecting the universities to the schools. Successful implementation was reported in which university faculty held teleconferences with school participants. Course instruction and staff development was reported as occurring via distance learning as well. However, consistent opinions of respondents revealed that the distance learning facilities were not being used to the envisioned capacity.

Data links between the schools and universities provided an avenue for follow-up. Using e-mail was reported as popular among participants and enhanced opportunities for collaboration. One CPDT described a unique project that used widespread cable television access to deliver staff development across multiple school districts and into the homes of the community. Recipients were able to videotape the sessions and use the tapes for review and follow-up. This method was reported as effective with teaching technology skills that require repetitive practice to learn.

*Pattern 6e. Behind the Screen: One-on-One Technology Training for University Faculty.*

Interaction with university faculty tended to take on a different flavor in regard to delivery of staff development opportunities. University faculty were reported to favor one-on-one attention rather than participate in large group activity, especially during technology training efforts. Respondents did not report the one-on-one attention as an
efficient model. University faculty were described as the most “challenging” participants for training purposes. One respondent referred to the one-on-one attention as an inefficient mode of crisis management.

Patterns of Effects

Pattern 7. Teachers: From “Just a Teacher” to Leaders, Mentors, Staff Developers, Collaborators, Tech Users, and Researchers.

I think I used to think of myself as just a teacher and there is not a bone in by body that says that anymore (Mendy, school representative).

Teachers reported a variety of personal and professional effects due to their involvement with the CPDT. Role changes and increased responsibilities resulted in increased feelings of teacher empowerment. Teachers emerged as leaders who had not previously been in leadership roles. Not only did they attend more staff development opportunities, but they also developed expertise and became deliverers of staff development. Teachers described opportunities in which they presented with university faculty at national and local conferences. Some teachers conducted research and published articles with university faculty. Some teachers described specific grant proposals they had written. All of these events led to teachers feeling more professional.

Teacher’s input was requested, respected, and valued. Their active involvement in mentoring preservice interns shed a new sense of responsibility to the profession as they became “more invested in the profession.” They also experienced effects of collaboration and found themselves opening up their classroom doors to discover new ways of sharing that led to feelings of empowerment and less isolation.
Teachers benefited from the CPDT's technology component. Not only did they have access to more technology, such as multimedia and telecommunications, but they also described how they implemented the technologies into their classroom curriculum.

Pattern 8. University Faculty: Connections, Collaboration, and Culture Wars

University faculty were effected by role changes that evolved through increased involvement on public school campuses. By coming out of the scholarly closet and into the living room of public visibility, they discovered the impact of real world differences on instructional content. Through collaborative team-teaching and observation, university faculty began redesigning course content based on real world relevancy. Breaking barriers of “old pedagogical delivery systems” became part of the process for creating field-based teacher education programs, as Lisa (university representative) explained:

It was the old pedagogical delivery system. We’re going to take this out there, and we’re going to show these people. We’re going to bring in four experts and we’re going to show these people how it’s done, and then tell them they have to do it. ...The PDS model says, “My name is Lisa. I teach at the university and I would like to come and sit in your classroom and learn what you’re doing.”

University faculty members became effective observers, listeners, and supporters for PDSs participants. The PDS environment provided opportunities for university faculty participants to collaborate with classroom teachers and update themselves on current staff development issues. They also benefited from collaborating with other university faculty members as illuminated in multi-university collaboratives.

Connecting with the public schools and learning new dimensions of collaboration caused dilemmas for university faculty. They reported the struggles of taking on the task of developing PDSs while trying to simultaneously hold their status as a tenure-track
faculty member. Many university faculty voiced the dilemma of “publication” vs. demands of a PDS (time and energy). The university culture and its reward system and the public school culture and its needs for creating PDSs evolved into “culture wars” for university faculty members.

Pattern 9. Interns: Classroom-Ready, Confident, Collaborative, Reflective, More Student-Centered, More Technologically Capable

University interns were a primary target for professional development and growth. They reaped the benefits of the PDS model in many ways. Respondents reported that interns were more confident, more comfortable in the classroom setting, and better prepared for their first year of teaching. They exited the program “classroom-ready” and “able to begin working effectively immediately” (Joanne, school representative).

The PDS experience provided the university intern with exposure to a diverse repertoire of teaching strategies. Jill (university representative) describes the intern as becoming more of a “connoisseur”:

They’re better prepared. They’re more confident. They’re open. They know what to look for. They don’t just become a clone of whatever teacher they’re with because they’ve been with several. ...they become a little bit more of a connoisseur. They pick and choose and select.

Their improved “menu” has provided more experience with technology, more experience with student-centered classroom environments, and more experience with inner-city school environments. “I think one thing that most of our (university) students are getting is experience with the diversity of children in classrooms - multicultural diversity and linguistic diversity” (Kay, university representative). The interns are in the schools more
and have more opportunities to reflect and grow through contact time with university
faculty and classroom teachers.

Pattern 10. Students: Pride, Attention, Connection, and Community

K-12 students benefited from the eight CPDT restructuring efforts. Having access to
new technologies in combination with an emphasis on student-centered learning, provided
many new learning opportunities. Students were reported as using the computer to work
collaboratively and make decisions. Learning computer skills also built confidence levels
in K-12 students. They entered the revolving door process by developing expertise and
sharing technology skills with interns, teachers, and university faculty participants.

K-12 students were described as developing a sense of "pride" from their new
accomplishments, which was accented through sharing with others:

I also feel like it's given us a lot of pride in what we do because we are so much in the
focal point. You know, we have visitors all the time that want to walk through our
classrooms and want to see what we're doing. And, I think it gives the kids that
feeling, too, knowing that anything they do, any project they do, someone's going to
look at it and comment on it (Jeanna, school representative).

Another effect that was reported for K-12 students was the advantages of increased
attention from having more adults present in the classroom:

The one's that actually benefit the most are the children because it's the mentor
teachers in concert - or in tandem - with the preservice teachers that are getting things
produced and done for the children in the classroom (Larry, university
representative).

I think probably for most of the children it's been a positive experience. And I guess
it just kind of intuitively makes sense to me that if you have more adults in a setting,
then children have more access to adults to guide and help and all those kinds of
things (Kay, university representative).
Pattern 11. Increased Dialogue and Involvement: Changes in Roles and Responsibilities

All eight CPDTs reported increased dialogue between the schools and the universities. Individual respondents described this “networking” between participants as previously being very limited. The conversation between the universities and the schools was described as “much different than the conversation that used to go on between schools and universities” (Gary, university representative). Various aspects mediated this dialogue. For example, the emphasis on technology and collaboration, as written in the CPDT rule from the state funding agency, became a part of the dialogue. The performance indicators and their emphasis on student-centered classrooms and inclusive models of multi-culturalism became part of the dialogue.

The collaborative nature of the CPDTs not only resulted in increased dialogue, but also demanded increased involvement of participants in each other’s worlds. This increased level of involvement resulted in various changes in individual roles and responsibilities. A “shift in responsibilities” was described between the classroom teacher and the university faculty member. The classroom teacher “helps with our preservice teachers and we (university faculty) are helping them with their staff development” (Teresa, university representative). Classroom teachers were reported as more involved in preservice teacher education through increased mentoring and modeling. They also worked with university faculty to redesign university coursework. Classroom teachers also were reported as experiencing increased professional activity through attending and presenting at conferences, attending and delivering staff development, conducting research, publishing articles, and writing grant proposals.
University faculty role changes surfaced from having more involvement with the public school environment. They were reported as being more collaborative, as evidenced by new approaches to team-teaching. They teamed with each other and with classroom teachers to redesign university course content and to make the course content more relevant to the real world environment. Lisa (university representative) summarized the university role as being built around a “listening model,” in which the university people learned to “listen” to the school people. The listening model provided the opportunity for dialogue and an avenue for autonomy. Each PDS site was given the freedom of being heard and of identifying their own needs. Learning to listen meant learning to accept individual PDS needs concerning pace and progress, even when pace and progress was not consistent with university faculty expectations.

Increased dialogue and involvement also resulted in breaking down barriers of isolation. The collaborative efforts of the CPDTs led to participants feeling less isolated. Classroom teachers were reported as “opening classroom doors” for the first time in years. University faculty members were reported as coming out of their “ivory towers” and building relationships in the public school environment. Rural PDS administrators, teachers, and K-12 student were connected to the outside world for the first time via telecommunications networking.

The Task Force on Professional Development Schools (1996, p. 14) addresses the notion of “isolation” as a “sign of change.” The Holmes Group (cited in the Task Force on Professional Development Schools, 1996, p. 14) illustrates that “one of the central tenets of the Holmes Group in Tomorrow’s Schools of Education is that educators will not
be prepared for isolated roles because success in the future depends on an ability to collaborate.” The Task Force on Professional Development Schools (1996, p. 14) further elaborates, “Teachers, administrators, and human services personnel working in isolation from one another cannot hope to effectively educate the growing number of at-risk students in our nation’s schools.”

Increased participant involvement within and across partner entities is a common outcome with university/school reform efforts. Darling-Hammond (1994, p. 1, 11) discusses how increased involvement of veteran teachers has caused them to “renew their own professional development and assume new roles as mentors, university adjuncts, and teacher leaders.” She further elaborates that “veteran teachers find themselves learning more about both the theory and practice of teaching as they teach novices.” “PDSs are creating entirely new frames for teacher learning - frames that provide opportunities for learning by teaching, learning by doing, and learning by collaborating” (Darling-Hammond, 1994, p. 11). Collaborative involvement has also effected university educators. By jointly engaging with school faculty, university faculty have expanded their knowledge base by putting “research into practice - and practice into research.”

Ponticell, Button, Johnson, Cates, and Ferguson (1994, p. 2) share similar levels of involvement and changes in participants in their study involving two professional development schools associated with a large public university in West Texas:

...our collaboration has greatly increased school-university dialogue, strengthened the site-based decision-making processes at the schools, redesigned the elementary and secondary teacher preparation programs, and enhanced the roles of both college faculty and school faculty's co-learners and co-inquirers into teaching, learning, and school organizational structures.
Pattern 12. Technology Toys: Carrots and Conundrums

The focus on technology in the eight CPDTs had unique effects on participant’s professional development. Technology was described as the “carrot” that encouraged participation across entities. The attraction of the “big toys” was a motivating force, as well as an interfering force. The “big toys” created a series of conundrums; a series of “intricate and difficult problems” (Merriam-Webster, 1977, p. 248). These conundrums became interfering factors for implementing effective staff development. The complexities of purchasing and installing equipment delayed practical training efforts. Respondents voiced frustration with timelines and support issues. The technologies advanced faster than the initiative could implement. Technology training content kept increasing and trainees became overwhelmed. One trainer expressed how she finally realized that “less is more.” Instead of introducing as many skills possible in a training session, she effectively concentrated on one or two skills over the entire semester.

Despite the challenges, technology awareness and implementation was reported to increase across all eight CPDTs for both university and school entities. The technology “carrot” provided new opportunities for many participants.

Pattern 13. The Demands of Institutionalization: The Miracle vs. Templeton the Rat.

Respondents predicted that institutionalizing the CPDT initiatives would negatively impact the professional development and growth of the participants. Institutionalizing means expansion. Expansion issues raised concern for quality control. Comments such as, “we’re getting so big that we’re splitting apart” and “sixty-six schools is too many,”
were indicators of this concern. Kathleen (school representative) summarized the issue of quality control as follows:

We need to protect the quality of the program. ...If you want people to respect education, they have to see quality. And what they see right now is that we're still doing the Target, Walmart, Kmart quantity thing. ...We ought to be the front leaders in being able to say that we're going to protect it so that means we're going to have to have more money. If we don't have the money then we're going to have to say to students, "I cannot put you in this program. You're going to have to go on a waiting list or another university." You've got to draw a line.

Institutionalizing means a shift from "voluntary participants" to "reluctant participants" (Frank, university representative). This shift was perceived as contributing to "a real danger of sabotage" at the university level. "University faculty members who are determined it won't work, don't like it, didn't like, never volunteered to begin with, who fought it from the beginning, and who are now expected to participate," will become very "reluctant participants" (Frank, university representative). This was predicted to threaten the quality of the program as well. The "Templeton the Rat" notion of "what's in this for me" could threaten the "miracle" of collaboration that has formed the foundation of the CPDT initiative.

In discussing the involvement of university faculty, the subject of tenure vs. non-tenured university faculty was illuminated. Time necessary for PDS collaboration in addition to pressure for conducting and publishing research to receive tenure was a factor against institutionalization. The Task Force on Professional Development Schools (1996, p. 34) recognized this problem in their reported statement:

With numbers of publications as the most widely recognized single criterion for promotion and tenure and for merit pay considerations, participation in professional development schools is, in practice, discouraged. Workload is commonly measured within colleges by a standard formula (e.g., three classes per semester plus three
research and university service hours per week). Time spent traveling to field sites, in developing collaborative relationships, and in practice in professional development schools is not easily incorporated into a standard formula (see Harris and Harris, 1994) and may be seen as time which could be better spent isolated in one's office writing articles for publication.

Ponticell, Button, Johnson, Cates, and Ferguson (1994, p. 3) further discuss how the “emphasis on research that is common to the university reward system, especially theoretical research, often takes time away from university involvement in the real world of schools” which underscores the tendency for university faculty to “jump to theoretical perspectives without necessarily relating research questions to actual contexts.”

Another issue discussed involving the institutionalizing of the eight CPDTs in this study deals with leadership issues. Leadership from the top was identified as critical to the successful implementation of the PDS model. “The top” was characterized in a variety of settings and included (a) the principal of a school, (b) the administration from the school district office, and (c) the administration at the university level. Visionary building principals were reported as providing an atmosphere characterized as “fertile ground” for a PDS. Without the principal’s support in a building, commitment to the PDS initiative was limited. This support was also necessary at the district office level. In particular, two CPDTs shared how a change in the district level superintendent effected the forward seeking focus of the district, consequently effecting the implementation of individual PDSs in each respective district. Top administrators at the university also were reported as having significant political influence on the implementation of the CPDT initiative.
Interpretations and Discussion

The study of the eight Texas CPDTs explicated the process of complex change reflected in the human and organizational changes involved in the initiation and implementation (restructuring) stages of the CPDT initiative (e.g., Fullan, 1993; Huberman & Miles, 1984) and pointed toward the dilemmas to be encountered in the institutionalization (reculturing) process. Structural and functional changes occurring within the Texas CPDTs indicate the growing demand for reculturing in which the interdependence of partnering entities is paramount.

Schlechty (1990, p. xvii) discusses the notion of restructuring as a structural framework for change processes:

Social structures are embedded in systems of meaning, value, belief, and knowledge; such systems comprise the culture of an organization. To change an organization’s structure, therefore, one must attend not only to rules, roles, and relationships, but to systems of beliefs, values, and knowledge as well. Structural change requires cultural change.

The eight CPDTs in this study provide stories of structural and functional reorganization processes - “restructuring,” in the language of reform. New rules were established when partners developed a focus and foundation, a “common ground”, from which they could all agree to operate. The emphasis on collaboration in the CPDTs created opportunities in which relationships were formed and barriers were broken so that a common vision could evolve over time. Roles changed from structural definitions to functional responsibilities. For example, one of the dynamic changes involved understanding the definition of “expert” - expert being whoever has the knowledge and the “consumer” being whoever needs the knowledge. The CPDTs had no predetermined
set of structured roles for its participants. In fact, participants described the frustration of not knowing their roles during initial phases of the initiative. As implementation processes progressed and needs emerged, university faculty and classroom teachers found themselves actually exchanging roles and depending on each other for expertise. The traditional notion of "the university as expert" and the "school as consumer" was no longer effective. Fullan (1993, p. 38) describes the symbiotic nature of relationships within change efforts as needing both top-down and bottom-up strategies.

Put differently, the centre and local units need each other. You can't get anywhere by swinging from one dominance to another. What is required is a different two-way relationship of pressure, support and continuous negotiation. It amounts to simultaneous top-down bottom-up influence.

So, what does this mean in terms of professional development? The functional purpose of professional development in the CPDTs needed to change from improving teaching to helping learners learn. "Learners" had to be more broadly defined to include K-12 students, university students, classroom teachers, university faculty members, administrators, and community participants. Consequently, professional development opportunities took on new dimensions when surrounded by the complexities of restructuring and the beginnings of re-culturing.

While the training model of staff development (Sparks & Loucks-Horsley, 1989) continued to be the primary method for disseminating new knowledge, this study calls attention to different dimensions of staff development. This study suggests there is value in thinking about professional development much more as relationships rather than in terms of control. This is especially true in inter-agency staff development, as in the case of PDSs. Anytime professional development agendas designate experts and designate
receivers, then a superordinate/subordinate kind of relationship is developed that limits readiness and limits openness to new information. Instead, professional development agendas need to emphasize relationship-building in which there is a basis of mutual caring, trust, communication, and a commitment to ongoing and long-term development.

Relationship-building creates a greater atmosphere of openness and interns, teachers, and university people learn to “learn together” as they also learn to “live together.” By being present in each other’s worlds, the “learners” become part of the mix and create a new culture that becomes more open to self-directed learning through supportive reflection.

The report to the Danforth Foundation (“Report to Danforth Foundation”, 1996, p. 1, 5) addresses the need for this type of reculturing:

Another critical finding of the report is the need to place professional development within the context of school-based change. Professional development within this context, then, is significantly affected by a school’s culture. “In good schools,” the report observes, “professional development is woven into the fabric of everyday life, into the kind of community that binds its members together. This is due in part to such practical matters as the way time is used and organized to allow educators to collaborate in joint work.”

The interdependence of school improvement, teacher and professor development, and the mutuality of collaboration became much more the focus of vision and enactment when professional development and reculturation became relationship-building.

Being present in each other’s worlds resulted in a variety of unanticipated side effects. By just “being together,” commitments to each other unfolded. Hendricks and Hendricks (1990) discuss relationship-building as a process of making “co-commitments.” They describe essential core commitments for relationship-building as committing (a) to being close; (b) to complete development as an individual; (c) to telling the truth and revealing,
rather than concealing self; (d) to full empowerment of all people; and (e) to taking full responsibility for actions.

Relationship-building in the eight CPDTs in this study provide examples of co-commitment processes in action. Teachers, university faculty members, and university interns developed interactive relationships that built self awareness through supported and honest self-reflection. They learned to empower each other through encouragement. They revealed themselves and broke barriers of communication. Teachers made commitments to develop relationships with interns. University faculty made commitments to develop relationships with classroom teachers. Both teachers and university faculty made commitments to learn from as well as learn with interns. Relationship-building led to the necessary ingredient, "trust".

Trust is a necessary component that allows the evolutionary nature of current change efforts to move forward. Partners in partnerships need to trust that the vision will evolve over time, and that each partner will contribute their share. This study reveals that the process of vision-building was that of an "evolving vision," versus a "predetermined vision." Participants learned to trust each other so that the vision was allowed to emerge through an ongoing cycle of iterations and revisions. Fullan (1993, p. 20) describes the "dynamic complexity" and "non-linear" circumstances of change efforts as being "inherently unpredictable." Pascale (cited in Fullan, 1990, p. 19) defines "productive educational change" as roaming "somewhere between overcontrol and chaos. Fullan further explains why change is so complex in today's society:

Take any educational policy or problem and start listing all the forces that could figure in the solution and that would need to be influenced to make for productive
change. Then take the idea that unplanned factors are inevitable - government policy changes or gets constantly redefined, key leaders leave, important contact people are shifted to another role, new technology is invented, immigration increases, recession reduces available resources, a bitter conflict erupts, and so on. Finally, realize that every new variable that enters the equation - those unpredictable but inevitable noise factors - produce ten other ramifications, which in turn produces tens of other reactions and on and on.

So, one of the meanings from this study is that we could productively approach professional development more as long-term relational learning. Long-term multi-institutional relationships, like PDSs, need to learn to trust the process of relationship-building and communicate, commit, and tell the truth with each other. Maybe it would be far more important to approach professional development as relational rather than merely as control, a transmission of knowledge.

Relational professional development provides a different type of framework. It deviates from both a deficit model of staff development which assumes some kind of deficiency, and a developmental model of staff development which assumes there is a definitive path of learning, and moves toward more of a relational model that is nourished by co-commitments and co-learning agreements to teach each other.

The discussion on relationship-building and commitment is underscored in Rudduck's description of a university/school initiative in England involving Sheffield Local Education Authority, Sheffield schools, and Sheffield University/Polytechnic (Rudduck, 1992). Emotional commitment to the initiative and to each other was one of the main insights learned during implementation phases. The Sheffield collaborative chose to use a “slogan” approach to initiate an early emotional bond with its participants. They carefully selected the slogan, “ownership,” and turned it into a main buzz word. “Ownership” was used to
make the participants “feel that they were participating in worthwhile communal action” (Rudduck, 1992, pp. 204-205). The participants also learned they needed to give attention to “the structure of power relationships and trust within individual institutions.” For example, some teachers were empowered and assumed leadership for spearheading change efforts, but they also began to understand the complexities of change and became “wary of assuming executive power in a system that had not formally given them power.” The Sheffield participants began to realize that the real task at hand was to change the culture of the school from an traditional ideology of “separatism” to a newer one of “collegiality” in which traditional authority structures were confronted (Rudduck, 1992, p. 206). This task was achieved:

The local authority, once it understood the problems, responded by giving special support to senior management teams in schools to help them work with their own seconded teachers to build a collective confidence in the possibilities of change and to clarify their own role in the process.

The need for commitment and relationship-building is emphasized in Rudduck’s list of five conditions necessary to implement cohesive and useful university/school partnerships (Rudduck, 1992, pp. 207-208):

1. Cohesive and useful partnerships depend on “the readiness of the partners to give up their traditional mythologies about each other, and learn to respect each other’s strengths and recognize each other’s needs and conditions for professional survival.”

2. Cohesive and useful partnerships depend on “building a shared commitment to well-judged change, to exploring alternatives and to pushing back the limits of possibility in learning.”
3. Cohesive and useful partnerships depend on “building a shared commitment to clarifying principles and purposes, and to understanding the social and political contexts in which those purposes and principles are set to work.”

4. Cohesive and useful partnerships depend on “accepting a shared perception of teaching as one of the ‘impossible professions’ - impossible because it has ideas which admit no easy realization, [and] goals that are often multiple, ambiguous and conflicting” (Sykes & Elmore, 1988, as cited in Rudduck, 1992, p. 208).

5. Cohesive and useful partnerships depend on “recognizing that the pace of worthwhile change - change that achieves new cultural coherence and significance - is relatively slow and that ways have to be found of keeping up the momentum.”

Watson and Fullan (1992) discuss the notion of relationship-building in their description of cultural relationships that developed in “The Learning Consortium,” a school/university partnership formed by four school boards in the vicinity of metropolitan Toronto, together with the Faculty of Education at the University of Toronto, and the Ontario Institute for Studies in Education. They discuss the difficulties of joining two very different cultures such as those that comprise both schools and universities. They summarize that each can learn from each other, but both need to change certain aspects of their culture. It is the process of changing a culture that requires communication, understanding, and even shifts in behavior. Watson and Fullan (1992, p. 218) suggest that “commitment to a partnership, with constant interaction around joint tasks, may lead to reconceptualizations of responsibilities, to the mutual benefit of both.” They conclude that “school-university partnerships, like other collaborative ventures, need to develop a shared
vision, an agenda that fulfills yet transcends self-interests” (Watson & Fullan, 1992, p. 239).

The eight Texas CPDTs described and analyzed in this study, indicate some major dilemmas that need to be resolved if reform and professional development are to move from restructuring to reculturing. The major dilemma is portrayed by the “miracle” vs. “Templeton the Rat.” Long-term continuity and commitment, even if conflict ridden, has to be a sustainable outcome of a major change initiative like the Texas CPDTs. Change takes time. If a long period of relationship is expected - as with PDSs - then behavior of participants is different than if short periods of relationship are expected. The “miracle” of collaborating needs to overcome the short-term, “Templeton the Rat” attitude of, “What’s in it for me?” The broader systems need to change to support - through resource allocation and reward systems - the needs of long-term relationships.

School reward systems are controlled by the need to teach the kids in classrooms. The principal’s task is to ensure to the community that students are achieving. Teachers are rewarded, in many cases, for conformity and control. Controlled environments can lead to disincentives to change and accept new people in the classroom, particularly when school districts have a very strong test driven agenda in which test scores are the major accountability device for students. Anything that impacts those test scores, such as having preservice interns in the classroom, in addition to having university presence with its overt or implied bent toward school improvement, is a risk for the school. State and local authorities need to provide an avenue that provides a sense of security for risk taking.
The university reward system is based on publications and research and the time required for publications and research is largely incompatible with the demands of PDSs. This study highlights that the collaboration and leadership needed from university faculty participating in PDS activity is in conflict with the demands for them to conduct research and publish. Response to these new demands is not necessarily rewarded in existing university reward systems.

Changing university reward systems has become a part of the ongoing conversation in educational discussions (Gibbs, 1995; Plater, 1995; Boyer, 1990). These authors discuss the dilemmas faced by institutions of higher education as the “research” vs. “teaching” debate increases to address the demands that restructuring efforts have on university faculty. Plater (1995, p. 23) states:

During the past three of four years, most faculty around the country have been engaged in serious discussions about the changing nature of our work....American higher education is going through a profound restructuring. How we manage this process and how we protect our most valuable asset, out time, is the subject of this article.

Prater elaborates that the current focus on K-12 school reform is changing what the public expects from colleges. “Virtually every recent report, study, or mandate affecting higher education links K-12 school reform with the need to improve higher education” (Prater, 1995, p. 23). With the emphasis on K-12 school reform comes the need for more “clinical education” and “practice-based learning.” The need to emphasize “teaching” is becoming more prevalent in addressing clinical type needs. PDSs, with their clinical, field-based focus are a part of this discussion.
If school districts fail to change their operations to allow for and support the needs of professional development schools and change to a partnership focus, then teachers will not have support. The same holds true for universities. If universities fail to recognize role changes of faculty members involved in PDSs and change university reward systems, university faculty will not have support. Without the necessary support for both parties, sustaining the PDS model will become difficult.

Implications for Policy, Practice, Theory, and Research

Based on data from the eight Texas CPDTs, implications emerged for professional development as implemented through the professional development school model. This section will discuss these implications and will be divided into four sections: (a) policy, (b) practice, (c) theory, and (d) research.

Policy

1. This study supports that building relationships is paramount to successful professional development. The Professional Development Schools model (Holmes, 1990), as supported by CPDT policymakers and implemented in the Texas CPDTS, provides a framework for professional development that supports collaborative relationship building. Relationship-building processes take time and require resources necessary to initiate and sustain the change process. Policymakers requiring complex change that involves changes in relationships, should provide resources for a multi-year period.

2. Policymakers should provide resources specifically geared toward relationship building. Relationship building processes add a new dimension to professional development. Building a shared commitment requires an increase in events that cater to social behavior.
Participants need time to build a common vision and learn to trust each other’s commitment to that vision. Senge (1990, pp. 229-230) states:

Visions spread because of a reinforcing process of increasing clarity, enthusiasm, communication, and commitment. As people talk, the vision grows clearer. As it gets clearer, enthusiasm for its benefits builds. ...A vision can die if people forget their connection to one another.

“Time to talk” needs to become part of policy and requires policymakers to underwrite costs that are not usually underwritten, such as time for collegiality and social accommodations, including food and refreshments for meetings.

3. Policymakers need to support the development of learning communities and make cost effective investments in school renewal processes that support all learners within the community. These investments need to support the long term economic, market, and political viability of PDSs as a medium for professional development. If this model is to survive, policymakers and implementors need to sustain their commitment long enough to provide a product that is superior.

Practice

This study of the eight Texas CPDTs illuminates relationship building practices as a major professional development focus. Based on numerous examples from the data, the following practices need to be included when designing and implementing a professional development agenda:

1. Cognitive coaching supports the notion of relationship-building. It is built around a collaborative process of planning, observing, and reflecting that is organized from the premises of establishing and maintaining trust, facilitating mutual learning, and enhancing autonomy and interdependence simultaneously (Costa, 1990). Costa (1990, p. 3)
emphasizes "trust" as being fundamental in "creating a safe atmosphere in which learning and change can occur." Coaching is a relationship building practice that has potential for reculturing schools to support open, honest communication and commitment:

Coaching develops positive interpersonal relationships which are the energy sources for adaptive school cultures and productive organizations. The pattern of adult interactions in a school strongly influences the climate of the learning environment and the instructional outcomes for students (Costa, 1990, p. 8).

2. Study groups are another viable source of effective professional development practices. “Time to talk” and “fireside chats” are examples of study groups in action. Teachers need to take time to reflect and learn. Schlechty (1990) emphasizes the need for teachers to become intellectual and thoughtful leaders if they are to successfully meet the needs of 21st century schools. Developing leadership qualities requires the type of nurturing provided through the collaborative sharing of study groups.

3. Relationship building processes require formal and informal gatherings that allow participants to communicate. Emerging leaders within these gatherings need to learn how to run efficient and purposeful meetings. “Meeting leading” is a necessary component in professional development practices and involves learning to use meeting leading tools, such as those described in Deming’s Total Quality Management system (McManus, 1992), or as described by E.I. duPont de Nemours and Company (Moving Toward Excellence, 1990).

4. To build relationships that reach a superior level of support for professional development opportunity, communication skills need to improve between the students, teachers, university faculty, administrators, and policymakers. Top-down and bottom-up decision-making needs to occur simultaneously (Fullan, 1990). All levels of participants
need to develop a better awareness of each other's worlds. Teachers need to learn to operate according to a political frame so they develop a better awareness of policymaker's desired outcomes (e.g., student achievement). Policymakers need to examine current reward systems for teachers and university faculty, and better match systems of accountability to the complex change efforts focused on 21st century schools (e.g., PDSs and university/school partnership).

Theory

1. Relational professional development provides a new theoretical dimension to professional development. Theory needs to be more heavily oriented toward relationship demands, such as trust, communication, and co-commitments. Partners in the relationship need to learn to trust each other, believing that each will contribute their share.

2. Vision-building processes need to depend on partnership “trust.” Pre-determined visions need to be replaced with an evolving vision process in which partners allow the vision to unfold through an ongoing cycle of iterations and revisions. The synergy of new arrivals does not hinder, but encourages this process. New ideas become a part of the cycle. Partners learn to trust the process through their trust of each other.

3. Networking and reculturing need to become strategies embedded in the theoretical underpinnings of professional development. Fullan (1996) states:

...systemic reform is partly a matter of redesigning the objective systems of interrelationships so that obvious structural faults are corrected. However, it mainly involves strategies (such as networking and reculturing) that help develop and mobilize the conceptions, skills, and motivation in the minds and hearts of scores of educators.
The PDS model for professional development underscores the notion of networking and reculturing. Collaborative efforts build coherence among participants as they exchange roles, rules, and responsibilities. Such structural and functional changes provide a potential impetus for enabling new cultures to emerge. Systemic reform is dependent on this process of reculturing (Fullan, 1996).

Research

1. PDSs provide a wealth of research opportunities for "professional development" and "change." More extensive research needs to be conducted in PDS classrooms. Classroom case studies and scenarios need to be gathered to determine if teaching practices in these classrooms actually change. Do teachers retain the knowledge base from professional development opportunities over time and implement actual instructional changes?

2. Along with researching instructional changes in the classrooms, PDSs and similar inter-agency agreements need to have a component of research for examining the results of these efforts on students in the schools. What happens on traditional measures of student achievement over a five (or more) year period of time? Will they follow Fullan's implementation dip (Fullan, 1993), or do they sustain themselves at the same level, or do they show increases over time?

3. In addition to examining traditional measures of K-12 students, the research needs to investigate K-12 students and the enhanced opportunities they may experience due to the implementation of the PDS model. When you add a cohort of interns and a PDS model to a school environment, opportunities for K-12 students to learn become richer. The presence of interns tends to provide additional opportunities such as new programs,
tutorials, and intermurals, that enrich the K-12 educational environment. What are the effects of PDSs on the K-12 students? What happens when K-12 students are provided with other opportunities to learn?

4. More study needs to be conducted in regard to the PDS intern. Follow-up studies need to be done indicating what levels of professional development and growth are retained after the PDS intern leaves the PDS environment. What happens to interns who learn to teach in a PDS and then go to a non-PDS to start their teaching? Do they retain practices that are constructivist and technology based or do they go back to what the environment supports, which may be non-technological and teacher-directed.

5. Reward systems need to be investigated. Do school districts that engage in PDS practice change evaluation systems to allow for greater acceptability of the range of practices being taught in the teacher education institution - or do they try to constrain by using the traditional evaluation systems for teachers and for students? Do institutions of higher education change reward systems to accommodate collaborative efforts of university faculty?

6. The notion of collaborative research is another area of potential research. The PDS environment encourages collaborative research. University faculty, classroom teachers, and building principals engage in a variety of opportunities in which they could conduct joint research projects. Is this happening? Is there an increase in collaborative research? What are the characteristics of collaborative research? Are the classroom teachers and university faculty actually joining in collaborative research? If so, what is the nature of the research? Does the instance of action research increase within PDSs?
7. Another area of concern in need of study deals with the relationships - the bonds - that develop at a particular PDS between the university site professor, mentor teachers, building principal, and students. This study indicates that site professors can become very attached to a PDS and its participants; and the participants can become very attached to the site professor. One PDS characterized the site professor as a “father figure.” What happens when the cycle is broken and a university site professor leaves a PDS to retire or take a break to write and publish? How dependent is an individual PDS on the cycle?

8. Another possibility for research on inter-agency initiatives, such as the PDSs, is to examine policy and practice decisions as they are being made. Collaborative decision-making was a consistent component across all CPDTs in this study. The processes of dialogue and discourse that occurs during collaborative decision-making provides another arena for further research (see Burbules, 1993; Maranhao, 1993; Noddings, 1994; Sockett, 1993). What are the components of the dialogue between partners? What is the structure of the dialogue? How do the relationships of the participants effect the dialogue?

9. Finally, but certainly not exhaustively, current research needs to investigate issues faced by SCDEs (Schools, Colleges, and Departments of Education) in accommodating the potentially different missions of PDSs that may also be charter schools, private schools, or religious schools. How do SCDEs deal with the long term economic viability of PDSs? How do they cost effectively implement a PDS model? How do SCDEs compete in the market place? Does the PDS model provide an avenue for strengthening market viability?
Conclusion

The PDS model, as described through the eight Texas CPDTs, provides examples of potentially many effective professional development opportunities for a very broad community of learners. PDSs can intend to create a “seamless web” between theory and practice - between what’s being taught in preservice and inservice education. Interns exit the PDS program classroom-ready and they are prepared to begin teaching the first year. Classroom teachers and university faculty grow together through a variety of formal and informal professional development opportunities, thus reducing the traditional theory-practice gap. Successful relationship-building processes can build a sustained learning situation for the entire community of learners.

But the future of Professional Development Schools remains cloudy. Serious tensions and the drive toward institutionalization and reculturing could derail the PDS movement. The theory of PDSs indicates there should be new agencies, that universities should extend themselves into the community through public service in ways that support and improve the precollegiate education of the universities own future students. There should be a cost effectiveness factor in pooling resources, both human and material, from the university and the schools to produce enhanced levels of professional development and learning opportunities for students. However, the difference in the cultures of the schools and the university, as noted some time ago by Sarason (1982) causes tensions that continue to confound efforts to produce a seamless web of relationship between teachers of the nations children from pre-kindergarten through grade 16. Professional Development Schools may, in the long run, offer solutions to integrating school and university goals and
purposes as well as providing models of professional development that allow for continued
growth over a teacher's career, while enhancing enormously the professionalism of
teachers by expanding the roles they play. On the other hand, PDSs may only be an
opening volley, a test bed for developing relationships between universities and schools in
what ultimately will become a Pre-K through 16 system of education open to all learners.
Or, PDSs may become simply another tombstone in the graveyard of educational
innovation in the late 20th century. Until PDSs can become integrated into the culture of
professional development for the teaching professions much as teaching hospitals have
become an expected part of the professional development of the medical profession, their
future will be one of struggle and evolving vision and enactment with both positive and
problematic results.
APPENDIX A

TEXAS CENTERS FOR PROFESSIONAL DEVELOPMENT AND TECHNOLOGY
APPENDIX A

TEXAS CENTERS FOR PROFESSIONAL DEVELOPMENT AND TECHNOLOGY

Centers Funded in 1992-93

[Map of Texas with stars indicating locations of centers: Lubbock, Denton, Commerce, College Station, San Marcos, Laredo, San Antonio, Nacogdoches]
APPENDIX A

TEXAS CENTERS FOR PROFESSIONAL DEVELOPMENT AND TECHNOLOGY

Additional Centers Funded in 1993-94
APPENDIX A

TEXAS CENTERS FOR PROFESSIONAL DEVELOPMENT AND TECHNOLOGY

Additional Centers Funded in 1994-95

[Map of Texas with stars marking locations such as Lubbock, Denton, Arlington, Abilene, Permian Basin, College Station, San Marcos, Houston, Beaumont, Houston/Clear Lake, San Antonio, Victoria, Laredo, Brownsville, and El Paso.]
APPENDIX B

INTERVIEW GUIDES
APPENDIX B

INTERVIEW GUIDES

Interview Questions and Probes (original)

I. Describe the “vision” for professional development in your collaborative.
   _____ What purposes did your “vision” try to address?
   _____ Collaboration?
   _____ Effective Teaching Practices?
   _____ Technology?
   _____ What was the process through which the “vision” was developed?
   _____ According to your Center’s “vision”, what would the ideal professional
development model look like for:
       _____ Inservice teachers
       _____ University faculty
       _____ Preservice teachers
   _____ What role did literature or research have in building your CPDT “vision”?
   _____ Describe any changes in “vision” that your CPDT has experienced.

II. How do you perceive this “vision” for professional development as being the
same or different from non-CPDT visions?

III. Describe the various professional development programs in your CPDT.
   _____ What is the basic structure of your professional development programs?
   _____ How extensive is implementation?
   _____ Who is implementing?
   _____ Who is participating?
   _____ Describe any feedback or follow-up procedures being used.
   _____ Describe any evaluation processes being used to determine program success.
   _____ Describe any literature-based or research verified professional development
   emphasis.

IV. How are the professional development programs developed under your CPDT
model the same or different from non-CPDT professional development programs?

V. Describe any effects that have occurred due to your CPDT’s professional
development efforts.
   _____ What are the effects on experienced teachers?
   _____ What are the effects on university faculty?
   _____ What are the effects on university students?
   _____ What are the effects on school children?

VI. How do you perceive effects occurring in your CPDT as being the same or
different from the effects of non-CPDT professional development programs?
APPENDIX B

INTERVIEW GUIDES

Interview Questions and Probes (revised)

I. Describe the unique aspects of “vision” for professional development in your CPDT collaborative.

_____ What purposes did your “vision” try to address?
     _____ Collaboration?
     _____ Effective Teaching Practices?
     _____ Technology?

_____ What was the process through which the “vision” was developed?

_____ According to your Center’s “vision”, what would the ideal professional development model look like for:
     _____ Inservice teachers
     _____ University faculty
     _____ Preservice teachers

_____ What role did literature or research have in building your CPDT “vision”?

_____ Describe any changes in “vision” that your CPDT has experienced.

II. Describe the unique aspects of enactment for the various professional development programs in your CPDT.

_____ What is the basic structure of your professional development programs?

_____ How extensive is implementation?

_____ Who is implementing?

_____ Who is participating?

_____ Describe any feedback or follow-up procedures being used.

_____ Describe any evaluation processes being used to determine program success.

_____ Describe any literature-based or research verified professional development emphasis.

III. Describe any unique effects that have occurred due to your CPDT’s professional development efforts.

_____ What are the effects on experienced teachers?

_____ What are the effects on university faculty?

_____ What are the effects on university students?

_____ What are the effects on school children?
APPENDIX C

FINAL LIST OF KEY INFORMANTS
### APPENDIX C

#### FINAL LIST OF KEY INFORMANTS

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<thead>
<tr>
<th>Role</th>
<th>Main Study</th>
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<td>Policymakers</td>
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<tr>
<td><strong>Respondents (Total)</strong></td>
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| Individual Interviewees (Total)                | 36         | 4           |
| University Representatives*                    | 25         |             |
| School Representatives                         | 6          |             |
| Education Service Center Representatives       | 2          |             |
| Policymakers                                   | 3          |             |
| **Focus Group Interviewees (Total)**           | 47         | (10 groups) |
| University Representatives*                    | 6          |             |
| School Representatives                         | 38         |             |
| Education Service Center Representatives       | 3          |             |
APPENDIX D

CODED INTERVIEW
APPENDIX D

CODED INTERVIEW

Respondent 1: Initially I was a member of the SD committee and when the chairman moved out of the Center area, then I took over the role chairman of the staff development committee. I really function in that role with other representatives from the other schools. That was mainly how I functioned with the Center - was in the staff development area. Now in my local district, I had two other things I was involved with. We had one of the intern administrators in our building and I worked with her. And the other part was the student teacher intern working with our teachers at the schools and the influence and how that particular collaboration grew and both groups benefited tremendously because the student teachers learned from the experienced teachers on-site and how the teachers in the fields took the ideas - especially in our district - relating to technology in the classroom and things that grew out of that for those people. I think that was a big asset. Which was a staff development component, but indirectly. It was not something we sat down and trained for.

Question: So you are employed by the district?

Respondent 1: Yes, ...

Respondent 2: I work for ... Independent School District. I was involved with the project from the very beginning of writing the planning grant and then serving on the team that wrote the grant and also, I’ve been involved with student teachers at our school district level. We have three sites that intern or field-based sites in our district and I work with the principals in coordinating. I also serve on the staff development committee.

Question: Is ... the largest district involved?

Respondent 2: Well, ... is a larger district, but we have more involvement. We have three sites.

Respondent 3: My primary responsibility with the Center is that I chair the recruitment committee; however, I do serve on the staff development committee and I’m secretary of the Center board and I was also one of the first site professors in the initial phases - with the secondary sites.

Question: So you were all involved from the beginning?
APPENDIX D

CODED INTERVIEW

Respondent 1: Well, I was involved in the initial implementation phases on the SD committee, but I did not participate with the grant writing.

Question: Did you become involved with the vision piece?

Respondent 1: Yes, we really planned up front from the very beginning with all the committees with their action teams and the vision of them.

Question: Let's look at the vision piece first... describe the vision for PD in your collaborative - How was your vision unique?

Respondent 2: I saw the vision as really changing the paradigm for all people involved - university staff and public school people began to have the same types of staff development and the developing of a common language dealing with professional and instructional strategies, delivery of instruction, and in all those areas that we did not have a common language at that time. In SD we were not - we did not have a common purpose either. They were looking at theirs just as a training of students. We were looking at training of the staff to improve the achievement of public school students. So, I would say that the bottom line of the whole vision was to provide a common language, common objectives, with the end results being improving what students learn in public schools - that's the bottom line.

Respondent 3: And we looked at SD as one of communicating that vision on the same level. I will say that many of us in higher education were honestly behind the public schools in regard to training and many of the innovations. We thought that in order for the Center to work effectively that we had to have first of all, true collaboration, and as mentioned, that true collaboration meant speaking the same language, and that we were on public school campuses. We were working closely with teachers and we needed to be trained in the innovation so we have made an effort to make sure that university faculty had an opportunity to participate right along with public school personnel at every phase. And I can say that I'm really proud of that Center because I think it is one of the best examples of collaboration that I have seen. We have not made one move without involving our partners in all of our decision-making.

Respondent 1: And sometimes that works against us because of time. It is difficult when you have a meeting- to make that happen, but it's very important that you do that way.

Question: What are some of the things that happened during that vision stage that maybe
APPENDIX D

CODED INTERVIEW

we can learn from in future restructuring efforts?

Respondent 2: To me, when I thought we were becoming a true collaboration or a true team, I think goes back to first with Dr. ... becoming the Dean of the School of Education. He was a very personable person and he got rid of all the titles and all the barriers that were between public schools and university. He insisted that we all be on first name basis when we came into meetings - we were all just participants. He broke down some of those barriers so there was not Dr. or Mrs. - and we seemed to come together as a team.

Respondent 3: One thing that I got to feeling was that when we had 5 partnership schools and initially I would say that ... and ... had more input initially then the other three partner schools. We learned that we could not speak for those three schools because their needs were very different. So, we made an effort to include them - of course they were different in size and location. We had some that were very rural - and because of distance and time, they were not able to meet with us all the time. We realized that their needs were very different and we could not make all our sites alike. We tried very hard to make sure we had the same kinds of accommodations at each site and we soon realized that that was impossible because of proximity to campus.

Question: So one of the biggest issues I hear you identifying is time...

Respondent 3: Yes, and each partner school district is different.

Respondent 2: In the beginning is was also the openness of the university staff. Dr.... and Dr. ... openness to invite us in - in a non-threatening way was a big asset. Teachers came in and felt very comfortable. Our teachers feel very comfortable working with university staff and I think it is that openness that the university staff displayed from the very beginning that set that tone.

Respondent 1: The model of the site professors - where the interns and other people are working as part of the public school faculty. They make a big effort in their role to part of the group and the community of the campus where they’re assigned. I think that’s real obvious in our district - of those site people being part of the whole group in working with the teachers and the interns. It’s the same...

Question: ...any literature-based models that really drove what you did at that the beginning vision stage...driving you in planning the professional development...

Respondent 2: When I’m saying professional development, I’m not looking at
workshops, I'm looking at change in the way people do things - or how they practice their skills for the art of teaching. So the whole field-based model was the basis of the staff development. It was not workshops. It was on-the-job type of training where the two people come together and learn from each other. At the beginning when we were developing the grant, in the beginning models, we were using the University of New Mexico model - their model had already done some intern things, too and we looked at their model. But the staff development models - the majority of change- or growth- or learning- or whatever, was in the model of the field-based site. When we put the professor on the campus, and we put students on the campus, and we had teachers there - that learning would take place from each other. The people learn really from each other. That’s the way learning really takes place in the actual practice. Not in workshops. The workshops can give you some information, but the actual learning of the professional development would take place when the university and public school teachers interacted and when the students say this interaction - and saw what was happening at the school - we called it on-the-job training.

Respondent 1: Like a medical internship. The “workshops” that we had - the one that my district has really carried on has been that model where you don’t go to the workshop and you’re finished, it was that you go learning something and then you carry it back and implement what’s happening and use that information. Like the 4MAT staff development that the university center helped promote through the staff development community is still going on. I was just telling them that we have about 200 starting Monday to continue on with the next phase of that training or to initiate the beginning phase of what actually started from that committee offering it so that it would be available to all the partner schools.

Question: So you are saying that the field-based model is actually your staff development model.

Respondent 1: And that’s what one person in our district who has been participating in the administrative portion of this, has really continued - in fact when I left and was coming over here - she stopped and told me ‘tell them how wonderful this is.’ She, she sees the benefit, where coming back and just doing the on-site at the university classroom - this is not the kind of administrative training that she really was wanting to do and this project provided her the opportunity that she might not have done just because of the time factor. This provided her the opportunity to earn that mid-management in a totally field-based - with some classroom combination where she was actually coming back, relating what the university people were saying and actually applying it.
APPENDIX D

CODED INTERVIEW

Respondent 3: One thing that I would like to say is when we were establishing the sites, the mentor teachers involved worked with the site professors to 1) determine the kinds of experiences as well as the content that they felt should be taught at each site, and we found that this worked very well in that rather than university faculty going into the schools and determining 'this is what we want the students to do while they are in your classrooms', we worked collaboratively with the mentor teachers and basically, based on their input, we determined the kinds of experiences for the content; 2) the mentor teachers were willing to meet with us periodically to give us feedback. We had a very open kind of thing where we could meet with them in a formal way or informally to make sure that things were going okay. An advantage, I think, is that we were able to stay on site full time. We have professors at most of the sites that are full time.

Respondent 1: And a direct communication link providing immediate communication back to the university through technology that is available to that site and that professor to two-way interact.

Respondent 3: We get the input from our partner school and we try to design formal QLC staff development based on this input - the needs of the district.

Question: Let's take a look at what you are all saying. In the beginning what did you see as the ideal mentor teacher?

Respondent 3: I think that was an evolving process. I not sure that we - first of all - determined that we were going to develop a process and we let the district develop the process as well as the criteria for master teachers. This team of teachers would review the applications and determine whether these teachers were the kinds of teachers that would make effective mentor teachers.

Question: Am I hearing that the roles weren't really defined at first - that they kind of became defined...

Respondent 3: Yes, we had an application process. Rather than university personnel reviewing those applications, we had a team of master teachers from the school district review them and determine whether they felt these teachers qualified.

Respondent 1: I think that's the way it started. We started off with the "master teacher" and of course we could have served 10 people at the master teachers level. So, as we got into it, we thought if we are going to serve 71 students on the campus, we have to look at what is the real purpose of field-based instruction. It is to improve what students learn.
which means to improve all the teachers not just some of them - and not just the teachers - at the very high levels, because if you are going to improve your staff, and you’re only putting your very best teachers - your ideal teachers in it, you’re really not improving the teachers that really need to improved. So, I think that now what we have looked for is a mentor teacher who is someone who is willing to change, wanting to improve, and willing to question their own practices. So, I think that now if you were setting it up, you would look for someone who is open to change; somebody who is willing to learn new things and try them; somebody that is willing to question their own practice - sort of take a step back and look - ‘What am I doing? Is that really working?’ That would be questioning their practice and wanting to get better, because I think that that is where staff development comes in from a person looking at - if you have mentor or a student intern in your class, I think you want a teacher in there that continually questions their own teaching behaviors. You don’t want someone in there that thinks ‘I know the only way and the right way to do it and I’m going to train someone else to do it exactly that way.’ If we learn more from research and we read more information, we have to open to say ‘I’m glad I found that out. What I’m doing is not really as effective as it could be.’ So, I think that you want a teacher that doesn’t see herself as perfect or that ‘I’m at the top and I know all the answers.’ You want a teacher that is continually questioning - of course, that’s usually the same teacher that is the best because to be the best you need to continually question your practices. The teacher that thinks she knows all the answers is usually an outdated and ineffective teacher.

Respondent 2: One of our sites conducted interviews with the teachers that wanted to be a mentor teacher and discussed that kind of role. At the end of the interview, the teacher decided whether they wanted to stay in or withdraw and observe for a semester and I think that was critical to the program. The teachers that had interns, I think have learned as much and are as excited about what they are doing as the student interns are.

Question: I’ll make note of that effect. What about the ideal for the university faculty?

Respondent 3: First of all, can I be honest with you? We fought out who would volunteer to go and that was one of the first criteria. These were people at that time who were in undergraduate education and basically volunteering. One thing for sure, we agreed to participate in all the staff development activities that were sponsored by the center and also participated in staff development on our campus. For example, the first semester that I was on campus, this particular building had a team-building staff development day and on that day, the interns, the site professors, the student teachers, support staff, and everybody participated in the staff development. It was a wonderful opportunity to make everybody feel a part of the school.
We determine what we need training in the most. For example, many of the public school teachers had had training in a lot of the areas that we had not had opportunities to receive training in. So, we made sure that were able to get those experiences.

Question: So, if you were to pull out the unique pieces of the vision piece - two or three of the unique pieces that make the CPDT initiative different from other SD programs you are familiar with, what would they be?

Respondent 2: Of course, I go back to the delivery of it where the real growth and change is between the interactions of the staff. It’s more of an informal model, but it is a very effective model. It’s not a formal ‘we’re going to sit down and learn’. It happens over time and it effects all parties involved. And that was the original vision - that the interactions at the site would cause change in the university professor - cause change in the public school teacher and administrator - cause change in the interns - and in the final summary, cause change in the performance of students based on these interactions. And that’s what’s happened. Our most powerful staff development has been the principal talking to the site professor and learning from each other; or the teacher talking to the site professor or the intern [... and ...] were by far a model group. It was unbelievable what happened at their site. So, what happened at the middle school was that the vision became a reality very quickly because they were the kind of professors that blended well with the staff. They accepted each other. It was a very open relationship. The principal was very open to change. The most unique part of it to me is in the minds - in the openness that occurred for staff development. It’s not what you do, it’s the openness and the attitude of the people toward change and working as a team.

Respondent 3: And another thing as we have grown, site professors meet periodically with mentor teachers on that campus. They also meet together as a group on campus here (university) where they bring with them on a monthly basis, a school administrator, and one or two teachers, so that they can share successes and look at areas where they need to improve.

Question: Are these meetings global across all sites?

Respondent 3: Yes, and it happens every month. Also, on those days the technology training is provided for those teams. When they come to campus, the site mentor teachers determine what area in technology training that they need training in and we have someone available to provide it.

Question: Any unique conclusions which you pulled from it?
APPENDIX D
CODED INTERVIEW

Respondent 1: I think, also, that the collaboration is a big piece. It's been wonderful.

Respondent 2: We had a lot of experts that weren't communicating with each other - sharing information. And there were other people who weren't really open to it. Now it just seems that it (CPDT) has opened everything up. People began to learn from each other.

Respondent 3: Another thing, we have partners who will not let the university run the show. All decisions that are made regarding the centers must include our partners.

Respondent 2: The Collaboration?

Respondent 3: Yes, it is. So we learned early that this is not an option. We can't have this "board" in names and go on and do our thing. That was not going to work. So we did not take any partner for granted and made sure that each had an intricate part in the decision making.

Question: Any elaboration on the collaboration piece?

Respondent 2: I can say this because they are from two very different districts. ... was the initial site. ... received a lot of training and equipment that the other districts did not receive. For an example, every mentor teacher is to get a computer and a printer. Every school received X amount of technology. That was wonderful. We got two quote buildings. Nice buildings here, so when we got ready to expand to ..., we were unable to do even half of that. So we have to do a lot of motivation to help them to understand why all these things are not available to them. And really its been wonderful how ... has come a board and has been just as much of a partner, just as involved as .... However, we have explained why the money was not there to do for ... what we did for .... And to look at the other partners there, there is even less money.

Respondent 3: One thing I want to note, that I originally designed (I'm not going to say anything after this). Our ideal design was to put internships at each of our schools. It quickly became evident that this was not possible. We have a spread out center, I don't know how many miles. We were going to go to ... another site and .... However, because students need to take courses on campus, we realized that we were not going to be able to put interns per say in the sites. What we would have to do is look at schools, to look at the addition of schools that were closer in proximity to campus in order that we can meet the needs of the student. So we added two smaller school districts that are closer in proximity to ... and even smaller in size.
A benefit to the district from that has been that some of the interns show up on days that they are not assigned to be there just because they know they are needed. And so that has been a kind of a nice thing that has happened. It shows their dedication to the program.

**Question:** One of the things which you had talked about that was one of the most powerful things that was enacted was the internal staff development that you saw happening with professors and your mentor teachers. I want to talk about that. Internal verses external. Did you see a difference? Elaborate on that. As part of the deliberant staff development, was it internal or external? What did you see as the most powerful and why? And you already answered part of that with what you talked about earlier. Anybody else who wants to speak about the internal verses the external type of delivery.

**Respondent 1:** Well, I think they’re different. Internal is just the on-going and hard to identify professional development. It’s ongoing and you’re continually modeling and developing both groups learning. Externally, you are presenting some strategy or model of something to be carried back and do the internal kind of growth by using it. I’m not sure that I could equate those as the same kind of development.

**Respondent 3:** Actually, we were knocked down in that particular role. I guess the CPDT provided opportunities for staff development for the partner schools. And the teachers, based on their desires and needs, however, we were not necessarily in that role of agreeing and disagreeing. In other words, we were to serve most of our partner schools, as I said earlier, to determine the staff development and the list was enormous in regards to “have we looked at the kinds of things that appeared most frequently” and that was the basis of our staff development. The same thing we are constantly in the process of doing now.

**Respondent 1:** The committee sort of just collaborated in a meeting and decided what they would promote. What all the schools would agree to. And I don’t know if we actually did a vote. We just reached consensus about we would agree to that this particular kind of training would be available to everybody, or if you had a trainer in one area that I didn’t, I could call on you and it was not any kind of fee involved that normally would be. So it was an exchange there of just within the Center that the committee would reach consensus on the things the Center would promote and offer it to all the schools.

**Respondent 3:** With the understanding that if the Center paid for you to be trained then you were to provide those services to our partner schools without a fee.

**Respondent 1:** For example, the administrative interns for the past year all participated...
in my school's 4MAT training that we did during this past year. That whole group was about twelve or fifteen who came to each of those training sessions and/or to participate along with our teachers.

Question: There was a lot of site based...this here Center did staff development that maybe this school over here didn't do?

Respondent 2: I think why it didn't happen was from the very beginning there was a core group of people that principals, teachers, administrators, university staff, that developed this common philosophy, this common goal. So when we got to the staff development, it was a group of people that agreed, that developed a needs statement, we looked at all kinds of staff development in writing the program. So that those things were talked about, and the group sought consensus from all parties because they were all in it from the planning depth. It brought teachers, principals, university staff, and administrators in. They had a common philosophy, I would say. We started off with some common beliefs about teaching and learning. So we didn't have much difficulty of agreeing on teaching and learning because the core group, which was a large group, had as many of the same beliefs in the philosophy of teaching.

Question: The global philosophy kind of held you together?

Respondent 2: Right. Whether we want to do, how do you improve what students learn?

Question: What happened when you expanded and that group that you initially started changed?

Respondent 2: It just kept going.

Question: It just kept going.

Respondent 2: Because the whole goal has been to improve what students learn. And what practices do that. And the practices all relate back to what happen in the classroom.

Respondent 3: Share with them what your plans are for the upcoming staff development. How did you start out? By sending one team and now we have a whole school district?

Respondent 2: Last fall, we had a fall conference and each school was asked to send a team. And each school did send many four and five member teams to a fall conference
and it was just overwhelmingly a success. I mean, they were just thrilled with the offerings and the diverse kinds of programs. There is something for all the different people, so one of our goals this year is to ask the district a common calendar day as one of their waiver days. We've done that and have it on - at least ... and ... - and a couple of others, I think there are at least four of the Centers of seven schools that actually have that as a waiver day for a larger fall conference here at the university. With not only outside people presenting, but then we also have called for programs within our own schools to share which they did a little bit last year. It has just been expanding, but that was ... idea that we put that as a common calendar.

Respondent 2: When we did a staff development survey for a needs assessment - all schools identified the same thing. Very early on, and I think that the Center had caused that to happen even more then usual - ... might not be thinking of doing the same things, and they always are.

Question: One last question, and it's a big one, but we'll take it wherever it goes. Effects. And I am not talking hard data, I mean that's so hard to get right now because a lot of what we see right now is so wonderful, but it's all perception. And that's what I want to hear. Your perception on the effects. What are the effects of the university faculty person, on the mentor teacher, and on the student? What do you see as the main effects of professional development that this Center initiative has brought on for those individuals?

Respondent 1: I believe one thing is the mentor teachers have a total new paradigm picture of the training program for the students that are going through as an intern. I believe they really feel that they influenced that, they participated in it, and now they have a totally new picture of the kind of students that will be graduating as a teacher through this kind of program for one thing. And the management program, too.

Respondent 3: Well, I'll feel that university professors and public school people are on the same page with regards to what training of the future teacher should look like. Putting them on the same page is positive.

Respondent 2: Well, I've seen a lot of change because I have been involved from the very beginning, and I have worked with the three sites that we have in our district. We have a lot of interns, we have a lot of student teachers. I would say the very first noticeable change when we started getting feedback was when the interns went into student teaching. The first group of interns that went into student teaching on another campus, the principals, teachers, and all the management was saying, "This is the very best student
APPENDIX D

CODED INTERVIEW

teachers we have ever had. We have never had a group of student teachers this good.”
And when we looked at who they were talking about, they were talking about the interns.
So it was noticeable that the interns had self confidence. They came into the student
teaching classroom ready. They believed that they could do they had a lot of self-
confidence and were very comfortable in the school environment. And they were able to
begin working effectively immediately, whereas, if a student had not been in a public
school environment (it was that getting used to being there, feeling out of place, feeling
strange) None of those things. They went in very comfortably, and very self-confidently.
I think our mentor teachers have become more aware with their practices. They are more
engaged in Professional Development. They read more educational information. They are
wanting to do things differently. Proposals I get from teachers to make a change or do
something new are now usually mentor teachers. That are beginning to think of
innovative ways to improve their instructions.

Question: Is that a change? Is that different?

Respondent 2: Before I was the initiator mainly. The Office of Instruction was saying,
“How would you like to try this?” And they were sending out articles of new innovative
things. Now we get articles from teachers. Saying, “I read this and I am interested in
doing it. Can I do it?” In fact, today a teacher has called me three times, “Have you read
my proposal? Can I do it? What do I need to do to initiate it?” These are innovative
based on good sound practices. It’s not fly-by-night things that they just dreamed up. In
fact, the last time she called, “Did you read my research?” And so it’s not just a one page,
“l’d like to do this”, it’s really a well though out research idea.

Respondent 1: Along those same lines, technology integrated in instruction has really
been a big barrier step that I see in our district from our teachers learning from our interns
and the student teachers. And also participating in the training that has been offered here
at the Center. Even our clerical staff has come and had training. And just the products
that we do and have have totally changed in their appearance. They are much more
professional looking and the things that the teachers are now trying in the classrooms -
integrating instruction. I believe that is a direct effect of those teachers of the students
from the university being there and being familiar with that.

Respondent 2: And some of the staff development, one ideal was the New Jersey
Writing project which we were trying to put in our schools. We had a site that they could
come and actually meet with teachers and it was a small group that they initiated a change
in those teachers. Also, we had another partnership with a reading clinic, The Reading
Lab. Which was a model of teaching that we did with kids, and the kids were able to
APPENDIX D
CODED INTERVIEW

initiate some change. Because they go back and say, "This was the book I wrote. This is what I did." And the other kids want to write a book too. So the teachers, instead, told them we want to write a book. Because they had left her class, the students brought the staff development. One other thing we talked about in the reading clinic is the first semester is the interns and the reading clinic students and the public school students learn the technology together. The second semester, a new teacher comes in, a new intern comes in, the student then teaches the intern. So our students, we think, have developed (the public school students) have developed staff development.

Respondent 3: That would be an effect as well. That would be unique...

Respondent 2: Right. That would be unique in teaching adults this technology.

Question: Can anybody speak to the effects of university faculty? I think we hit the mentor teachers well, we've hit the students well. How about university faculty? How are they effected by this initiative? I think ... did mention something in the beginning when she talked about getting back on track. Seeing what's going on in the schools and doing the staff development. Anything else?

Respondent 2: One thing, prior to this, the university people were very isolated and didn't have any access to public school information. Any information we got from the Texas Education Agency, the State Board did not go the university staff. So all the changes the state was implementing because the Higher Education Board and the TEA were not collaborating. So all the information and all the change we were expected to make dealing with instruction and curriculum, the university people had no access to that information. So they were teaching this curriculum, and we had this curriculum, mandated curriculum. And they did not have access to that kind of curriculum.

Respondent 3: That's why I mentioned earlier that the some school personnel was much more advanced in terms of innovation that were currently being used in schools. We were behind in our training and this has provided an opportunity for us to feel comfortable. And as a result of this, public school people and university people present, do presentations together, do some teams in terms of providing staff development.
APPENDIX E

CONTACT SUMMARY
APPENDIX E

CONTACT SUMMARY

Contact Summary Form

<table>
<thead>
<tr>
<th>Contact Type:</th>
<th>Technology</th>
<th>Site:  (omitted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview Type:</td>
<td>Individual</td>
<td>Date: 5/16/95</td>
</tr>
</tbody>
</table>

1. What were the main issues or themes that struck you in this contact?
   - Emphasis on student-centered classrooms vs. teacher-centered classrooms
   - Did not appoint teachers to get training; provided introductions and only those interested went on for more
   - University faculty - weak point in regard to technology professional development; tend to want to do everything by themselves

2. Summarize the information you got (or failed to get) on each of the target questions.
   - Vision: (not experienced - entered project after vision-building processes)
   - Enactment: Inservice. Conferences, training sessions every Thursday, introductory sessions; experts emerged, integrating technology into curriculum emphasis, focus on thematic planning. University. Weak point, prefer to do all by themselves, learned best on individual basis and by back door method - seeing it in action by their students in the classroom wins them over. Interns. Integrated technology into block courses - all helped to design.
   - Effects: University learning through back door method; technology integrated more effectively in student-centered classrooms than in teacher-centered classrooms

3. Anything else that struck you as salient, interesting, illuminating, or important in this contact?
   - They reversed the train-the-trainers model by first providing introductory instruction for everyone. Those that showed interest went on for more training and became the trainers.
   - Prior to CPDT influence, the main use of technology for university faculty was to develop literature review databases - period.
   - Individual instruction vs. group instruction for university faculty vs. classroom teachers.

4. What new (or remaining) target questions do you have in considering the next contact with this site?
   - Student-centered vs. teacher-centered classrooms (follow-up)
   - Back door method for university (from university person's perception)
APPENDIX F

SITE-BY-SITE MATRIX
APPENDIX F

SITE-BY-SITE MATRIX

<table>
<thead>
<tr>
<th>Question 1&amp;2</th>
<th>Individual Interviews</th>
<th>Focus Group Interviews</th>
<th>Documentation</th>
<th>Interpretive Notes</th>
</tr>
</thead>
</table>
| Vision       | (U) Theory into practice  
(U) Changing the rubber beneath the road - not happening  
(U) Will take years/multiple iterations  
(U) Critical pedagogy/teachers as change agents/look at the professional lives of teachers  
(U) Aspects of dialogue - student-centered, inclusive models of, multiculturalism, technology - tech stress the most  
(U) Voice of the school paramount  
(U) Teacher as Research - craft orientation  
(U) CPDT/virtual reality/part of a broader notion of restructuring  
(U) Built from informal visits  
(U) Secondary Ed. Collaborative vision building prior to TEC - SEC independent  
(U) SEC based on Sizer's Essential & Glasser's Quality Schools  
(U) SEC - extensive governance | (S) To come out of isolation  
(S) To integrate technology  
(S) Wanting students to be intrinsically motivated  
(S,U) Vision building initiated from University course on PDSs - planted the seed for one principal  
(S) "How can we help to prepare better teachers?"  
(S) "We have a lot to share" - fertile ground  
(S,U) Broken barrier: University not coming in to fix what's wrong  
(S) Breaking barrier - using first names | Mission Statement, Goals, Objectives:  
- collaboration focus  
- technology focus  
- restructuring teacher education focus  
- professional development focus | Collaboration and committee processes that resulted in redesigning the secondary program - a lot of vision building and team building.  
(name omitted) was adamant about my understanding that SEC was separate from TEC - and therefore not dependent on TEC money.  
Every interviewee seemed to have a vision about PDSs and preparing teachers. |

(U) - University Representative; (S) - School Representative; (E) - Education Service Center Representative
### Appendix F/ Site-by-Site Matrix

<table>
<thead>
<tr>
<th>Question 3&amp;4</th>
<th>(U) Highlights: technology &amp; collaboration/partnering relationships</th>
<th>(S) Different phases - TEC then CPDT</th>
<th>Six (seven proposed) compressed video systems acquired and operational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enactment (continued)</td>
<td>(U) Built social and technological infrastructures</td>
<td>(S,U) Technology - TEC &amp; $ - took over entire first year</td>
<td>-conferences held between PDSs</td>
</tr>
<tr>
<td></td>
<td>(U) Inclusionary model</td>
<td>(S) Different phases - TEC then CPDT</td>
<td>-school/university conferences</td>
</tr>
<tr>
<td></td>
<td>(U) Year 1 focus: Learning how to work together and how to get technology into classrooms - performance indicators? No</td>
<td>(S) “Circle of collaboration”; friendships formed; networking</td>
<td>-multiple site conferences</td>
</tr>
<tr>
<td></td>
<td>(U) PDSs without being under TEC’s umbrella</td>
<td>(S) Changing roles/teachers teaching profs</td>
<td>Much of staff development on newly acquired technology.</td>
</tr>
<tr>
<td></td>
<td>(U) Lion’s share of money into technology</td>
<td>(S) Teacher researchers</td>
<td>ESCs delivered SD</td>
</tr>
<tr>
<td></td>
<td>(U) Site coordinators/A&amp;M liaisons/increased dialogue</td>
<td>(S,U) Person-to-person contact prior to compressed video sessions</td>
<td>Attendance at Multicultural events</td>
</tr>
<tr>
<td></td>
<td>(U) Diversity Institutes</td>
<td>(S,U) Technology cadre model</td>
<td>Program development initiatives:</td>
</tr>
<tr>
<td></td>
<td>(U) Autonomy of sites/voice of the school is paramount</td>
<td>(S) Benchmarking</td>
<td>-CD-ROM based curricular materials for the American Chemical Society</td>
</tr>
<tr>
<td></td>
<td>(U) Schools opted in for various reasons - tech carrot</td>
<td>(S) Monthly SD on tech</td>
<td>-A special summer course on multimedia</td>
</tr>
<tr>
<td></td>
<td>(U) Profs mentoring teachers who teach courses for them</td>
<td>(S) Interdisciplinary curriculum development with tech</td>
<td>-An integrated, tech enhanced curriculum for 4th grade</td>
</tr>
<tr>
<td></td>
<td>(U) Wrote grant proposals with teachers</td>
<td>(S) Integrating curriculum, 4MAT, Learning Styles - lesson plan on seven intelligences</td>
<td>-Global Village project - used compressed video</td>
</tr>
<tr>
<td></td>
<td>(U) Prof role - instigator, facilitator, support and follow-up</td>
<td>(U) University model of PD is on a one-on-one crisis basis and very inefficient</td>
<td>Restructured TE programs</td>
</tr>
<tr>
<td></td>
<td>(U) SEC Phase Development Teams prepared implementation plans</td>
<td>(S,U) Building capacity at each PDS site - relying less on external</td>
<td>-Young Learners program</td>
</tr>
<tr>
<td></td>
<td>(U) SEC Oversight Committee</td>
<td>(S) Site visit to Louisiana - high tech</td>
<td>-Middle School program</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(S) Different phases - TEC then CPDT</td>
<td>-Secondary program</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(S) Teachers teaching methods</td>
<td>Respondents were very comfortable interviewing with me over the distance learning system. I could tell they had been using the system.</td>
</tr>
</tbody>
</table>

(U) - University Representative; (S) - School Representative; (E) - Education Service Center Representative
### Appendix F/ Site-by-Site Matrix

<table>
<thead>
<tr>
<th>Question 5&amp;6 Effects</th>
<th>Reviewed overlap</th>
</tr>
</thead>
<tbody>
<tr>
<td>(U) More dialogue between schools and university</td>
<td>(U) SEC piloted courses</td>
</tr>
<tr>
<td>(U) Burnout</td>
<td>(U) SEC sent up for approval with university curriculum committee</td>
</tr>
<tr>
<td>(U) Tenured vs. non-tenured</td>
<td>(S) Broke isolation - isolation not just distance, but also attitude</td>
</tr>
<tr>
<td>(U) Prof seeing what interns need more of by being in schools</td>
<td>(S) Leaders emerged with increased professionalism/teachers practicing professionalism</td>
</tr>
<tr>
<td>(U) Profs learning to use tech by being in schools-seeing it used</td>
<td>(S) Teachers learn from being on display for interns - modeling</td>
</tr>
<tr>
<td>(U) Profs mentoring teachers who teach courses for them</td>
<td>(S) Burnout of teachers</td>
</tr>
<tr>
<td>(U) High level of involvement - profs/teachers, teachers/interns</td>
<td>(S) Strong relationships built between individuals - network</td>
</tr>
<tr>
<td>(U) Prof energized/missionary</td>
<td>(S) Student-centered/teacher has become a facilitator</td>
</tr>
<tr>
<td>(U) Teachers writing proposals</td>
<td>(S) So much leadership when you free these people</td>
</tr>
<tr>
<td>(U) Teachers presenting</td>
<td>(S) Prof feeling closer bond to students because in the schools more with students</td>
</tr>
<tr>
<td>(U) Institutionally-no commitment</td>
<td>(S) &quot;They kind of treat you like a father&quot;</td>
</tr>
<tr>
<td>(U) SEC teacher's input valued</td>
<td>(S) Students getting more adult attention</td>
</tr>
<tr>
<td>(U) Teachers unsure of new roles</td>
<td>(S) Teachers learning by listening more</td>
</tr>
<tr>
<td>(U) Students more prepared and have more learning opportunities</td>
<td></td>
</tr>
<tr>
<td>(U) Teachers consultants for university courses</td>
<td>(U) Empowerment/professionalism</td>
</tr>
<tr>
<td>(S) SD determined by site needs</td>
<td></td>
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</tbody>
</table>

I really noticed a "father" relationship with (professor A) at (PDS A). They just love him. I asked him what would happen if he left - or retired. Just as I thought, they would have difficulty replacing him.

All three university profs - (professors A, B, and C) - are tenured faculty that are doing this as a little perk to their feelings of accomplishment. They expressed how junior faculty could not possibly have such luxury. I wonder how they bought in so readily. Maybe (professor A's) sabbatical on PDSs was a motivator. (Professor B) was purely in it for pleasure.

(U) - University Representative; (S) - School Representative; (E) - Education Service Center Representative
APPENDIX G

CROSS-SITE MATRICES
# APPENDIX G

## CROSS-SITE MATRICES

### Summary of Cross-Site Matrices

<table>
<thead>
<tr>
<th>Vision content</th>
<th>SFA</th>
<th>SWT</th>
<th>A&amp;M</th>
<th>CEDE</th>
<th>PSP</th>
<th>ET</th>
<th>UNT</th>
<th>RC</th>
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</thead>
<tbody>
<tr>
<td>Holmes/Goodlad</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Collaboration</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Field-Basing</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Technology</td>
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<td>X</td>
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<tr>
<td>Mentoring</td>
<td></td>
<td></td>
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<td></td>
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<td>Constructivism</td>
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<tr>
<td>Inclusionary Model PD</td>
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<tr>
<td>Autonomy of sites</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>Site Visits</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

| Vision process: | | | | | | | | |
|-----------------| | | | | | | | |
| Vision-building | X | X | X | X | X | X | X | X |
| Team-building   | X | X | X | X | X | X | X | X |
| Governance      | X | X | X | X | X | X | X | X |
| Site Visits     | X | X | X | X | X | X | X | X |

| Action formal: | | | | | | | | |
|----------------| | | | | | | | |
| Site Specific Needs | X | X | X | X | X | X | X | X |
| Cadre Development | X | X | X | X | X | X | X | X |
| External/Internal | X | X | X | X | X | X | X | X |
| Conferences     | X | X | X | X | X | X | X | X |
| Institutes/Workshops | X | X | X | X | X | X | X | X |
| Installing Equipment | X | X | X | X | X | X | X | X |

| Action Informal: | | | | | | | | |
|------------------| | | | | | | | |
| Interactions     | X | X | X | X | X | X | X | X |
| Revolving Door   | X | X | X | X | X | X | X | X |
| Back Door        | X | X | X | X | X | X | X | X |
| Reflection       | X | X | X | X | X | X | X | X |
| One-on-one       | X | X | X | X | X | X | X | X |

### Effects Vision

| Site Specific - drove | X | X | X | X | X | X | X | X |
| Field-Based PD       | X | X | X | X | X | X | X | X |
| Vision emerged/enact | X | X | X | X | X | X | X | X |
| Collaboration the Glue | X | X | X | X | X | X | X | X |

### Effects People

| Increased Dialogue | X | X | X | X | X | X | X | X |
| Increased Involvement | X | X | X | X | X | X | X | X |
| Changes in Roles/Resp. | X | X | X | X | X | X | X | X |
| Burn-out/Overload   | X | X | X | X | X | X | X | X |
| Less Isolation      | X | X | X | X | X | X | X | X |

### Effects Process

| Breaking Barriers   | X | X | X | X | X | X | X | X |
| Overcoming Skepticism | X | X | X | X | X | X | X | X |
| Feeling Comfortable | X | X | X | X | X | X | X | X |
| Focus on Equipment  | X | X | X | X | X | X | X | X |
| Tech Carrot         | X | X | X | X | X | X | X | X |
| Telecom/Connectivity | X | X | X | X | X | X | X | X |

| Institutionalizing | X | X | X | X | X | X | X | X |
**APPENDIX G**

**CROSS-SITE MATRICES**

<table>
<thead>
<tr>
<th>VISION Content</th>
<th>Process</th>
<th>ENACTMENT Content</th>
<th>Process</th>
<th>EFFECTS Content</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holmes/Goodlad</td>
<td>Governance</td>
<td>Facilitation training</td>
<td>Interactions: Learning from each other (revolving door)</td>
<td>Common: language philosophy playing field</td>
<td></td>
</tr>
<tr>
<td>Collaboration</td>
<td>Action Teams</td>
<td>Site specific needs: - Tech training</td>
<td>Site specific needs drove</td>
<td>Increased dialogue</td>
<td></td>
</tr>
<tr>
<td>Field-Basing</td>
<td>Site Visits</td>
<td>- Mentor training</td>
<td>Field-based nature encour-aged interactions</td>
<td>Increased levels of involvement</td>
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<tr>
<td>Technology</td>
<td>Vision building retreats</td>
<td>- A-MAT training</td>
<td>Vision emerged during implementation</td>
<td>- Teachers with preservice</td>
<td></td>
</tr>
<tr>
<td>Inclusionary model of PD</td>
<td>Team building events</td>
<td>- Conflict management</td>
<td>Collab. the glue</td>
<td>- Prof's in schools</td>
<td></td>
</tr>
<tr>
<td>Autonomy of sites/site specific goals</td>
<td>Removing titles</td>
<td>External Experts</td>
<td>Educa-tion and responsibil-ities: T. presenting</td>
<td>Technology</td>
<td></td>
</tr>
<tr>
<td>More intense</td>
<td>University not telling schools</td>
<td>Training cadres</td>
<td>T. helping design courses</td>
<td>carrot/motivator</td>
<td></td>
</tr>
<tr>
<td>More attention to TE program</td>
<td>Communication Connectivity to support collab. via telecomm.</td>
<td>Building interna-tional capacity</td>
<td>T. mentoring &amp; modeling</td>
<td>Tech advanced</td>
<td></td>
</tr>
<tr>
<td>More attention to diversity</td>
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- Univ. over-coming skepticism |
- Focus on tech equipment delayed "use" |
- Technology carrot/motivator |
- Follow-up |
- Site pros |
- Mentors |
- Tech SD/ Biggest obstacle |
- Scheduling problems |
- Tech success only when integrated |
- Less isolated/networking
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<td>Site specific needs:</td>
<td>Interactions: Learning from each other</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Site Visits</td>
<td>Tech training</td>
<td>-vision</td>
</tr>
<tr>
<td>Field-Basing</td>
<td>Vision building retreats</td>
<td>-Mentor training</td>
<td>-commitment</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Team building events</td>
<td>External Experts</td>
<td>Site specific needs drove</td>
</tr>
<tr>
<td>Technology</td>
<td>Removing titles</td>
<td>Training cadres</td>
<td>Field-based nature</td>
</tr>
<tr>
<td>Inclusionary model of PD</td>
<td>University not telling schools</td>
<td>Building inter-nal capacity</td>
<td>encour-aged</td>
</tr>
<tr>
<td>Autonomy of sites/site specific goals</td>
<td>Communication: Connectivity to support collab. via telecom.</td>
<td>Purchases and installing tech</td>
<td>interactions</td>
</tr>
<tr>
<td></td>
<td>Equipment drove tech deci-sions</td>
<td>Conferences</td>
<td>Vision emerged</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Institutes</td>
<td>during implementation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Retreats</td>
<td>after site visits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Workshops</td>
<td>Collab. the glue &quot;the gell&quot;</td>
</tr>
</tbody>
</table>

**Notes:**
- Teachers: -empowered -more aware/ reflection -more prof responsibility -input valued -more invested -leaders emerge -better decision-makers
- Prof's spread thin/time
- Interns better prepared
- Less isolated/ networking
### APPENDIX G: CROSS-SITE MATRICES

<table>
<thead>
<tr>
<th></th>
<th>VISION</th>
<th>ENACTMENT</th>
<th>EFFECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Content</td>
<td>Process</td>
<td>Vision</td>
</tr>
</tbody>
</table>
| RC     | - Holmes/Goodlad  
         | - Collaboration  
         | - Field-Basing  
         | - Technology  
         | - Inclusionary model of PD  
         | - Autonomy of sites/site specific goals | - Governance  
         | - Vision building retreats  
         | - Team building events | - Site specific needs:  
         | - Tech training  
         | - Mentor training  
         | - Integrated curriculum  
         | - Multicultural threads  
         | - Assessment  
         | - External Experts  
         | - Training cadres  
         | - Building internal capacity  
         | - Conferences  
         | - Institutes  
         | - Retreats  
         | - Workshops | - Interactions: Learning from each other:  
         | - Mentor/Intern  
         | - Intern/Mentor  
         | - Prof/Prof  
         | - Learning from interns  
         | - Reflection | - Site specific needs drove  
         | - Field-based nature encour-aged  
         | - Leadership issues | - Increased dialogue  
         | - Increased levels of involvement | - Change in roles and responsibilities:  
         | - More mentoring  
         | - Trust/respect | - Teachers:  
         | - Self-esteem  
         | - More aware/reflection  
         | - More prof. responsibility  
         | - Input valued  
         | - Interns better prepared | - Breaking barriers between partners  
         | - Feeling comfortable with partners  
         | - Institutionalize |
REFERENCES


Report to Danforth Foundation emphasizes the importance of professional development. (1996, May). The Developer, 1, 3.


