THE INFLUENCE OF SCHOOL CULTURE, SCHOOL GOALS, AND TEACHER COLLABORATION ON TEACHERS’ ATTITUDES TOWARD THEIR PROFESSIONAL DEVELOPMENT PLANS

by

Laurie J. Sullivan
A Dissertation
Submitted to the
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Doctor of Philosophy
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Date: ____________________________ Spring Semester 2010
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DEDICATION

To my husband Chuck, you have always been my personal cheerleader since we met in 9th grade. Throughout the dissertation process you encouraged me to strive to be the best doctoral student possible. I have appreciated our countless discussions that prompted me to think more deeply. I admire your intelligence and patience, especially when I experienced technical difficulties during the dissertation process. I love you and I am looking forward to celebrating our 25th anniversary this summer in Bermuda…as Dr. Sullivan!

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ABSTRACT

THE INFLUENCE OF SCHOOL CULTURE, SCHOOL GOALS, AND TEACHER COLLABORATION ON TEACHERS’ ATTITUDES TOWARD THEIR PROFESSIONAL DEVELOPMENT PLANS

Laurie J. Sullivan, Ph.D.

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Dissertation Director: Dr. Gary R. Galluzzo

The Professional Development Plan (PDP) is a specific professional development model situated within the teacher evaluation system being implemented in the Owen Public Schools (pseudonym). The purpose of this study was to investigate the influence of school culture, school goals, and teacher collaboration on teachers’ attitudes toward their Professional Development Plans. Data were also collected on teachers’ perceptions of the steps of the PDP process to determine which steps had the greatest influence on teachers’ attitudes toward their Professional Development Plans. The sample for this study was composed of 154 prekindergarten through high school teachers within one school district.

Participants held a range of attitudes from very positive to very negative toward the Professional Development Plan. Significant correlations were found between teachers’ attitudes toward the Professional Development Plan (TAPDP) and four out of the five factors of school culture. The factors of school culture - Collaborative
Leadership, Teacher Collaboration, Professional Development and Unity of Purpose - were shown to be associated with teachers’ attitudes toward the Professional Development Plan, although the relationships were not strong. Only the school culture factor Collegial Support was found not to be associated with teachers’ attitudes toward the Professional Development Plan. Of the five school culture factors, only the factor Professional Development was a significant predictor of teachers’ attitudes toward the Professional Development Plan.

One aim of the research project was to discover the extent to which PDPs conducted individually and PDPs conducted collaboratively differed on teachers’ attitudes toward the Professional Development Plan. The data showed a moderate effect size that suggested the variance in TAPDP scores was accounted for by whether a teacher collaborated with other teachers on a PDP or whether it was an individual effort.

Another purpose of the research was to determine the extent to which PDPs aligned with school goals and PDPs not aligned with school goals differed on teachers’ attitudes toward the Professional Development Plan. The data indicated a very large effect size and highlighted that a very large portion of the variance in TAPDP scores was accounted for by whether a teacher aligned the PDP with a school goal or whether the PDP had little or no alignment with a school goal.

With regard to the steps of the PDP process, each of the four steps correlated positively with teachers’ attitudes toward the Professional Development Plan. The strength of the relationship between TAPDP and Writing a Goal Statement was moderate, while strong relationships were evident for Describing Strategies/Activities for Reaching
PDP Goals, Collecting Evidence of Progress on PDP and Reflecting on Evidence and Results of the PDP. Furthermore, when the steps of the PDP process were examined for their combined ability to predict TAPDP, two steps emerged as predictors. The two steps with the most influence on TAPDP were Describing Strategies/Activities for Reaching PDP Goals and Reflecting on Evidence and Results of PDP.

Lastly, all of the demographic variables were found to be statistically nonsignificant for describing differences in TAPDP scores suggesting that years of teaching, educator role, gender, level of educational attainment and teaching level did not influence teachers’ attitudes toward the Professional Development Plan.
1. Introduction

The purpose of this study was to investigate several potential influences on teachers’ attitudes toward a specific professional development model, the Professional Development Plan of the Owen Public Schools (pseudonym). The Professional Development Plan (PDP) incorporates many of the characteristics that research has shown contribute to successful teacher learning including extending over a significant amount of time, connecting to teacher practice, encouraging reflection, and being situated in the workplace. Teachers may also choose to align their PDPs with their schools’ goals and conduct their PDPs collaboratively. The research project investigated the influence of school culture, school goals, and teacher collaboration on teachers’ attitudes toward their Professional Development Plans. In addition, the project involved collecting data on the steps of the PDP process and determining which steps had the greatest influence on teachers’ attitudes toward the Professional Development Plan.

Background

In education reform “it must not be forgotten where the ultimate power to change is and always has been – in the heads, hands, and hearts of the educators who work in our schools. True reform must go where the action is” (Sirotnik, 1989, p. 109). Although these words were written twenty years ago, the ideals that Sirotnik shared are pertinent in today’s education landscape and corroborated by others (Lieberman & Miller, 2001). His
point is direct; if we want to advance our schools, we must involve the educators who work daily with students. In addition to relying on teachers to be leading agents of school change, teachers themselves must change (Cohen, 1995). As Fullan and Hargreaves (1992) noted, one of the ways teachers change is through becoming learners themselves. Teacher learning is a crucial step to meeting the expectations of what teachers need to know and do in the 21st century. As Cochran-Smith (2005) remarked in her AERA presidential address, the expectations for teacher performance in the 21st century are dramatically different from in the past.

Putnam and Borko (1997) stated that much of the current practice of teaching is based on presenting and explaining content, and learning is considered the retention of facts and skills. This is a far cry from the vision of the teacher in the 21st century. The demands on what teachers should know and be able to do with regard to educating increasingly diverse groups of students have recently escalated (Bransford, Darling-Hammond, & LePage, 2005). Teachers now must understand how children learn and how to teach diverse learners, know how to make decisions about what is taught and how to teach that content, use assessment and feedback for learning as well as for evaluation, understand that learning in the classroom and beyond is culturally mediated and that students learn more effectively when teachers build upon the “funds of knowledge” that exist in their communities, and manage classrooms so that learning time is optimized and behavior problems are solved in a respectful manner (Bransford et al., 2005).

Many of the standards mentioned above overlap with the National Board for Professional Teaching Standards (NBPTS). The NBPTS is based on five core
propositions of what teachers should know and be able to do: (a) Teachers are committed to students and their learning, (b) Teachers know the subjects they teach and how to teach those subjects to students, (c) Teachers are responsible for managing and monitoring student learning, (d) Teachers think systematically about their practice and learn from experience, and (e) Teachers are members of learning communities (National Board for Professional Teaching Standards, 2002).

The work by Bransford et al. (2005) and the National Board for Professional Teaching Standards (2002) illustrate that teaching is a complex act. Lieberman and Miller (1999) posited that movements to professionalize teaching have produced an expanded role for the teacher. In addition to the teaching standards previously mentioned, this expanded role emphasizes collaborative planning and other kinds of joint work with colleagues (Hargreaves, 2000).

The aforementioned research brings to light the dynamic nature of teaching, and how it is virtually inextricable from learning. The professional teacher, to be effective, must become a career-long learner (Fullan, 1993; Wise, 1996). In fact, Sykes (1999a) referred to teaching as the learning profession. Learning leads to high quality teaching and high quality teaching is a key determinant of student learning (Fullan, 2007). With this connection between teaching and learning, awareness is growing that professional development can be a powerful pathway to teacher excellence, which is in turn crucial to student success (Neville & Robinson, 2003). As many researchers have noted, there is nothing more influential on student learning than the quality of the teacher (Bransford et al., 2005; Darling-Hammond, 2000; Hawley & Valli, 1999; Wise, 2000).
Statement of the Problem

If the means to school improvement are skilled and qualified teachers for every child (Ashton & Webb, 1986; Barth, 2001; The National Commission on Teaching & America's Future, 1996), how can we structure the education system to make this a reality? One way to improve our schools is through professional development for teachers (Borko, 2004).

Professional Development

In the research literature the term professional development is often used interchangeably with the terms professional learning, teacher learning, professional growth, and staff development. To ease the problem of repetition these terms will be used interchangeably within this research study. Guskey (2000) defined professional development as “those processes and activities designed to enhance the professional knowledge, skills, and attitudes of educators so that they might, in turn, improve the learning of students. In some cases, it also involves learning how to redesign educational structures and cultures” (p.16). The National Foundation for the Improvement of Education (1996) stated that “the goal of professional development for teachers is to increase student learning” (p. xiii).

Recently a new paradigm of professional development has emerged. Slowly the tradition of the one-day off-site “one-size fits all” training is being replaced by professional development that takes place over a long duration of time (Garet et al., 2001), incorporates research on what is known about how people learn (Bransford,
Brown, & Cocking, 2000), and is situated within the teacher’s workplace, the school (McLaughlin & Talbert, 2006).

The 2009 report, Professional Learning in the Learning Profession: A Status Report on Teacher Development in the United States and Abroad (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009) asserted that although research is growing on the characteristics of effective professional development, many teachers are not experiencing high quality professional development. The report stated, “Effective professional development is intensive, ongoing, and connected to practice; focuses on the teaching and learning of specific academic content; is connected to other school initiatives; and builds strong working relationships among teachers” (p. 5).

If a professional teacher is expected to be a career-long learner to be effective with students (Fullan, 1993; Wise, 1996), then schools must be places where teachers engage in effective ongoing professional learning. Barth (2001) shared:

I believe that schools can become much more than places where there are big people who are learned and little people who are learners. They can become cultures where youngsters are discovering the job, the difficulty, and the excitement of learning and where adults are continually rediscovering the joy, the difficulty, and the excitement of learning. Places where we are all in it together – learning by heart. (p. 29)

**School Culture**

Teacher learning within the school not only can change teacher practice, but can change the school culture as well (Lieberman, 1995). School culture is a complex pattern
of “norms, attitudes, beliefs, behaviors, values, ceremonies, traditions, and myths that are deeply ingrained in the very core of the organization” (Barth, 2002, p. 7). Culture affects how people think, feel, and act (Peterson & Deal, 2002) and has been shown to play an important role in the professional growth of educators (Peterson, 2002). As Bruner (1996) argued, culture shapes mind. Learning and thinking are always situated in a cultural setting. An interesting aspect of researching culture is the reciprocal effects. The school culture affects teachers’ beliefs, cognitions, and behaviors and teachers’ beliefs, cognitions, and behaviors influence the school culture (Rosenholtz, 1991).

One type of school culture that has been shown to have a positive impact on schools is a collaborative school culture (Ashton & Webb, 1986; Barth, 2006; Fullan & Hargreaves, 1992; Fullan, 1990; Little, 1982; Rosenholtz, 1991; Saphier & King, 1985). Gruenert (2005) wrote, “Collaborative school cultures – schools where teacher development is facilitated through mutual support, joint work, and broad agreement on educational values (Fullan & Hargreaves, 1996; Little, 1990) – have been presented as the best setting for learning for both teachers and students” (p. 43). Gruenert (1998) considered the following factors to comprise a collaborative school culture: Collaborative Leadership, Teacher Collaboration, Professional Development, Unity of Purpose, Collegial Support, and Learning Partnership. These collaborative school culture factors can be described as the following:

- Collaborative Leadership describes the degree to which school leaders establish and maintain collaborative relationships with school staff. The leaders value teachers’ ideas, seek their input, engage them in decision-

6
making, and trust their professional judgment. Leaders support and reward risk-taking, innovation, and sharing of ideas and practices.

- **Teacher Collaboration** describes the degree to which teachers engage in constructive dialogue that furthers the educational vision of the school. Teachers across the school plan together, observe and discuss teaching practices, evaluate programs, and develop an awareness of the practices and programs of other teachers.

- **Professional Development** describes the degree to which teachers value continuous personal development and school-wide improvement. Teachers seek ideas from seminars, colleagues, organizations, and other professional sources to maintain current knowledge, particularly current knowledge about instructional practices.

- **Unity of Purpose** describes the degree to which teachers work toward a common mission for the school. Teachers understand, support, and perform in accordance with that mission.

- **Collegial Support** describes the degree to which teachers work together effectively. Teachers trust each other, value each other's ideas, and assist each other as they work to accomplish the tasks of the school organization.

- **Learning Partnership** describes the degree to which teachers, parents, and students work together for the common good of the student. Parents and teachers share common expectations and communicate frequently about
student performance. Parents trust teachers. Students generally accept responsibility for their schooling.

(Gruenert, 1998, pp. 89-90)

The culture of a school can also create roadblocks to professional development. In some schools, professional development is not valued and teachers do not believe they have anything new to learn (Peterson, 2002). Leithwood (1992) reported that many school cultures are characterized by informal norms of isolation and stifle teacher growth. School cultures are often resistant to change and isolated teachers usually continue to do what they have always done (Leithwood). In addition, each school has an ambience (or culture) of its own (Goodlad, 1984), and this culture dictates its collective personality (Gruenert, 2008; Schein, 2004). The school personality can work for or against school improvement efforts (Barth, 2002), such as teacher professional development. Hence, the culture of the school affects the way professional learning opportunities are viewed (Peterson & Deal, 2002; Wagner & Masden-Copas, 2002).

**Teacher Attitudes**

The culture of the school is a powerful influence on teachers’ attitudes (Boyd, 1992). Reciprocally, teachers’ attitudes influence the norms of the school culture and the way we do things around here. The concept of attitude includes ways of feeling, thinking and behaving (Holfve-Sabel, 2006). Myers (2008) defined attitude as “a favorable or unfavorable evaluative reaction toward something or someone (often rooted in one’s beliefs, and exhibited in one’s feelings and intended behavior)” (p. 120).
Teacher attitudes can have a strong effect on teachers’ practice. Teachers with positive attitudes towards an instructional practice will use it more frequently in their classroom (Donerlson, 2008; Wilkins, 2008). Although there is much debate among researchers regarding the attitude-behavior relation, most agree that other variables such as the qualities of the person and the situation can influence the extent to which attitudes guide behavior (Fazio & Petty, 2008). Ajzen and Fishbein (1977) have shown that people’s actions are related to their attitudes when focused on a specific object, rather than a general overarching concept. Because attitudes influence behavior, knowing something about them can help us to predict people’s overt actions in a wide range of contexts (Baron, Branscombe, & Byrne, 2008).

**Purpose**

The purpose of this study was to investigate several potential influences on teachers’ attitudes toward a specific professional development model, the Professional Development Plan of the Owen Public Schools. The Professional Development Plan infuses many of the characteristics recommended in the section above describing effective professional development including sustained over a long duration of time, situated in the teacher’s workplace, and adult learner-centered.

**The Professional Development Plan**

Owen Public Schools, an inner-ring suburban school district outside a major mid-Atlantic city, began full implementation of the Professional Development Plan during the 1999-2000 school year. The Professional Development Plan is one component of the
school district’s teacher evaluation system. The evaluation system has four main components:

- Performance Evaluation Plan for probationary teachers
- Professional Development Plan (PDP) for non-probationary, successful (not on a Formal Improvement Plan), tenured, continuing contract teachers
- Analysis of Professional Practice (APP) for successful non-probationary teachers, which begins in Year 6 of Owen service and is repeated every fourth year
- Formal Improvement Plan for non-probationary teachers who need additional support

The PDP is based on the assumption that professional learning is continuous and it is a part of every teacher’s responsibility to engage in professional development (Owen Public Schools, 2008; Danielson, 2008). The PDP process begins with a teacher or group of teachers developing a learning goal in collaboration with their administrator. Goals are selected from one or more of the following categories:

- Teacher Goals – directly related to delivery of instruction
- Student Goals – related to desired learner outcomes
- Program Goals – related to the District Strategic Plan, the School Management Plan, curriculum development, and committee involvement
- Professional Responsibilities Goals – related to improving self, school, and district.
After a goal is selected, teachers incorporate the goal into a question to guide their learning for the year. For example, one teacher’s PDP question may be, “How does explicit instruction in decoding improve student reading skills in decoding, comprehension, and fluency?” Over the course of the school year, the teacher (or a group of teachers) engages in activities related to their individualized PDP focus. Opportunities for active learning include analyzing student work, planning lessons incorporating new strategies, reflecting on a lesson that was taught, writing, and discussing an educational book. Throughout the year teachers collect evidence in support of their PDP focus. Evidence may include portfolios, personal journals, test results, assessments, curricular units, and contributions to professional journals and other publications. At the end of the year teachers reflect on the evidence, write a summary, and talk with their administrator about the quality and outcomes of the professional growth experience. In addition to such collegial conversations and sharing evidence with the administrator, each teacher has the option to share the PDP at the district Professional Learning Fair held every May. Overall, the steps in the PDP process involve (a) writing a goal statement and PDP question, (b) describing the strategies and activities for reaching the PDP goal, (c) collecting evidence of progress toward the PDP goal, and (d) reflecting on the evidence and results of the PDP.

Although the PDP has been in place since the 1999-2000 school year, there has been little investigation into teachers’ attitudes toward it as a mechanism for professional growth, nor into the influences that school culture, collaborative inquiry, and alignment with school goals might exert on teachers’ attitudes toward the PDP.
The specific purpose of this study was to investigate the influence of school culture, school goals, and teacher collaboration on teachers’ attitudes toward their Professional Development Plans. In addition, this research project involved collecting data on the various steps of the PDP process and determining which steps had the greatest influence on teachers’ attitudes toward the Professional Development Plan. The study was guided by the following research questions:

1. To what extent do the factors of school culture (Collaborative Leadership, Teacher Collaboration, Professional Development, Unity of Purpose, Collegial Support) correlate with teachers' attitudes toward the Professional Development Plan (PDP)?

2. Do the factors of school culture (Collaborative Leadership, Teacher Collaboration, Professional Development, Unity of Purpose, Collegial Support) predict teachers’ attitudes toward the PDP?

3. To what extent do the steps of the PDP process correlate with teachers’ attitudes toward the PDP?

4. Do the steps of the PDP process predict teachers’ attitudes toward the PDP?

5. To what extent do PDPs conducted individually and PDPs conducted collaboratively differ on teachers’ attitudes toward the PDP?

6. To what extent do PDPs aligned with school goals and PDPs not aligned with school goals differ on teachers’ attitudes toward the PDP?
7. Do teachers’ attitudes toward the PDP differ for their years of teaching, educator role (classroom, specialist), gender, level of education (B.A., Masters, Ph.D.) and teaching level (Elementary, Secondary)?

**Significance of Study**

In any reform, cultural support is crucial for a change to be successful (Deal & Peterson, 1999; Joyce, 1990). This study serves as a link in the chain of research on the influence of school culture on teacher professional growth within a teacher evaluation system. It also corroborates the research on the importance of reflection for teacher learning. The study addresses a gap in the research as there is a distinct deficit of research on collaborative Professional Development Plans within an appraisal system.

This study provides practical significance for the Owen Public Schools and for other districts considering implementation of the Professional Development Plan. School leaders may be persuaded to cultivate a school culture that values the Professional Development Plan as a vehicle to enhance teacher learning and encourage teachers to work collaboratively on PDPs to advance the goals of the school so that ultimately student learning soars.
2. Review of the Literature

Culture is both a product and a process. As a product, it embodies wisdom accumulated from experience. As a process, it is renewed and re-created as newcomers learn the old ways and eventually become teachers themselves. (Bolman & Deal, 2008, p. 269)

Overview

The purpose of this study was to investigate the influence of school culture, school goals, and teacher collaboration on teachers’ attitudes toward their Professional Development Plans. In addition, this research project involved collecting data on the various steps of the PDP process and determining which steps had the greatest influence on teachers’ attitudes toward their Professional Development Plans. The study was guided by the following questions:

1. To what extent do the five factors of school culture correlate with teachers’ attitudes toward the Professional Development Plan (PDP)?
2. Do the factors of school culture predict teachers’ attitudes toward the PDP?
3. To what extent do the steps of the PDP process correlate with teachers’ attitudes toward the PDP?
4. Do the steps of the PDP process predict teachers’ attitudes toward the PDP?
5. To what extent do PDPs conducted individually and PDPs conducted collaboratively differ on teachers’ attitudes toward the PDP?

6. To what extent do PDPs aligned with school goals and PDPs not aligned with school goals differ on teachers’ attitudes toward the PDP?

7. Do teachers’ attitudes toward the PDP differ for their years of teaching, educator role (classroom, specialist), gender, level of education (B.A., Masters, Ph.D.) and teaching level (Elementary, Secondary)?

This chapter begins with a synthesis of the literature related to teacher professional development, including a section on teacher attitudes related to professional development. The chapter continues with an examination of the theoretical framework for this study, school culture. Following, the influence of school culture on teacher evaluation systems designed for professional growth is illustrated. Presented next is a review of Professional Development Plans, often referred to as Professional Growth Plans, which are being implementing across the United States and Canada. The chapter concludes with a thorough description of the professional development model being investigated in this study, the Owen Public Schools’ Professional Development Plan.

**Professional Development**

Professional development can be defined as “those processes and activities designed to enhance the professional knowledge, skills, and attitudes of educators so that they might, in turn, improve the learning of students” (Guskey, 2000, p. 16). McLaughlin and Talbert (2006) have stated that improved student learning depends upon teacher learning.
The importance of teacher professional development is cited in numerous reports and research studies. The No Child Left Behind Act of 2001 (NCLB) contained a section targeting teacher professional development. NCLB specifically required professional development activities that “are high quality, sustained, intensive, and classroom-focused in order to have a positive impact on classroom instruction and the teacher’s performance in the classroom” (U.S. Department of Education, 2001). The National Staff Development Council’s (NSDC) new statement of purpose is for every educator to engage in effective professional learning every day so every student achieves (Mizell, 2007). “High quality” and “effective”, words written by NCLB and NSDC, are repeated in numerous research studies and federal reports. Many researchers have reported that effective, high quality professional development results in improvements in teachers’ knowledge and skills and changes in classroom practices that impact student learning (Desimone, Porter, Garet, Yoon, & Birman, 2002). Speck and Knipe (2005) described high quality professional development as a “sustained collaborative learning process that systematically nourishes the growth of educators (individuals and teams) through adult learner-centered, job-embedded processes. It focuses on educators attaining the skills, abilities, and deep understandings needed to improve student achievement” (p. 3). The report, Teachers Matter: Attracting, Developing, and Retaining Effective Teachers (Organisation for Economic Co-operation and Development, 2005) indicated that for professional development to be effective teachers need to be actively involved in analyzing their own practice with regard to professional standards and their own student’s progress in the light of standards for student learning. Guskey (2003) stated that many
research studies focused on professional development used different criteria to determine “effectiveness” and have developed lists that could be described as “research-based” effective professional development practices.

The following section of this chapter contains a synthesis of the characteristics of effective professional development that many researchers have shown have a positive effect on teacher learning. Following this section, several of the research studies that are mentioned in the synthesis are described in more detail.

**Characteristics of Effective Professional Development**

The characteristics of effective professional development that have been compiled below are a result of reviewing the literature on this topic. The professional development characteristics have been grouped into the following categories: (a) Duration, (b) Focus on Content and Pedagogy, (c) Coherent and Goal Driven Professional Development, (d) Learning in the Workplace, (e) Active Learning, and (f) Educators Learning Together. Each is described below.

**Duration.** Research has shown that professional development that consists of a one time event is not effective (Borko, Elliott, & Uchiyama, 2002; Darling-Hammond, 2005; Mizell, 2007). The No Child Left Behind Act clarified that high quality professional development activities are not one-day or short-term workshops or conferences (U.S. Department of Education, 2001). Instead what is recommended are continuous learning activities that unfold over time (Hawley & Valli, 1999; Loucks-Horsley, 1995; Sykes, 1999a). Research by Little (1986), Garet et al. (2001) and others have confirmed that professional development that is both sustained over time and
includes a substantial number of hours was more likely to be of higher quality. The report, *Teachers Take Charge of Their Learning: Transforming Professional Development for Student Success*, stressed that it takes both time and sustained effort for teachers to move from new ideas to a change in practice and ultimately to increased student achievement (Renyi, 1996). In addition, time needs to be provided to teachers during the regular school day to engage in professional development activities such as study groups (Hudson, 2002; Kennedy, 2006).

**Focus on content and pedagogy.** Teachers should possess deep knowledge about the subjects they teach and understand how to effectively teach those subjects to their students (Birman, Desimone, Porter, & Garet, 2000; Bransford et al., 2000; Friedman, 2004; Sparks & Hirsh, 1997). Effective professional development focuses on both content knowledge and pedagogical content knowledge (Loucks-Horsley, 1995). Pedagogical content knowledge is the "ability to anticipate and respond to typical student patterns of understanding and misunderstanding within a content area, and the ability to create multiple examples and representations of challenging topics that make the content accessible to a wide range of learners" (Grossman & Schoenfeld, 2005, p. 201). Sykes (1999b) recommended that teacher professional development be embedded in the specific content that the students in the teachers’ classrooms will be learning.

**Coherent and goal driven professional development.** Effective professional development is aligned with school goals. For example, Loucks-Horsley (1995) suggested that teacher learning could be focused on a school goal such as alternative assessments to inform instruction. Sparks and Hirsh (1997) noted the importance of
aligning student objectives and outcomes with staff development activities. Guskey (2000) stated that effective professional development is guided by explicit goals and those professional development efforts begin with the “end in mind”. Guskey recommended that “we be explicit about the goals of professional development, especially in terms of the classroom or school practices that we hope to see implemented and the results that we would like to attain in terms of students. In essence, this involves developing a list of the intended outcomes” (p.17). Instead of focusing mainly on teaching, effective professional development puts emphasis on students demonstrating learning (DuFour, Eaker, & DuFour, 2005). “Results-Based” or “Results-Driven” professional development aligned with school goals has been shown to alter teacher instructional practices in ways that benefit students (Sparks & Hirsh, 1997).

Birman et al., (2000) found that coherence of professional development goals with school policies and other professional development experiences was directly related to increased teacher learning and improved classroom practice. The authors stated that “coherence indicates the extent to which professional development experiences are part of an integrated program of teacher learning-activities that are consistent with teacher goals, build on earlier activities, are followed by additional activities, and involve teachers in discussing their experiences with other teachers and administrators in the school” (p.31)

**Learning in the workplace.** Effective professional development takes place in the context of the workplace as teachers work together on issues that are relevant to them (DuFour et al., 2005; Hawley & Valli, 1999; Loucks-Horsley, 1995; Rosenholtz, 1991).
The National Foundation for the Improvement of Education (Renyi, 1996) and the National Staff Development Council (2001) recommended that professional development be embedded in the job of teaching. Ball and Cohen (1999) described the benefits of teacher learning being “centered in practice” with opportunities for learning coming from work samples and lesson plans from real classrooms. Along these same lines, Putnam and Borko (1997) suggested that there are various ways to situate teacher learning in practice, and these experiences can take place inside and outside of the classroom. Examples include observing, modeling, coaching, and analyzing student work or videotaped lessons. Additional examples of learning being situated in the workplace are provided in the following sections Active Learning and Educators Learning Together.

**Active Learning.** The effectiveness of opportunities for teachers to become actively engaged in learning is mentioned frequently in the literature (e.g., Garet et al., 2001). Opportunities where teachers are active learners include planning how to use new curriculum materials and new teaching methods, analyzing student work, observing teachers and being observed, conducting teacher research, writing and reflecting on classroom experiences, and discussing teaching and learning with other educators.

Dialogue with colleagues is critical to establishing an environment that supports long-term school and classroom improvement. As teachers engage in an interchange of ideas, they begin to examine their own practice and their assumptions about teaching, deepen their collective understanding, and develop support systems that encourage continual inquiry. They become more thoughtful about their practice and the
strategies that they use to help students learn. (Southwest Educational Development Laboratory, 2000, para.1)

Lambert (2003) summed up the benefits of active learning through dialogue: “The purpose of dialogue is understanding; when we truly listen and build on each other’s ideas, we construct meaning and knowledge together” (p. 23). Active learning is often referred to as “learner-centered”. Professional development that is learner-centered builds on the strengths, interests, and needs of the learner (Bransford et al., 2000). In the report, No Dream Denied: A Pledge to America’s Children, a “one-size fits all” model of professional development was criticized as an ineffective approach to teacher growth (National Commission on Teaching and America’s Future, 2003). Instead, it was recommended that teachers be involved in “planning their own learning opportunities designed around the existing skills and knowledge of each teacher and the needs of the students with whom they work” (p. 45).

Learner-centered professional development activities are based on constructivist philosophies of learning (Marx, Blumenfeld, & Krajcik, 1998). Constructivist theory suggests that learners actively construct knowledge by interpreting events through their existing knowledge and beliefs (Putnam & Borko, 1997). Learning occurs when there is a partial discrepancy between existing cognitive structures and the new learning experience (Sparks & Hirsh, 1997). It is strongly recommended that teachers themselves experience active, constructivist learning so that they will be able to integrate these types of learning experiences into their classroom teaching (Putnam & Borko, 1997; Sparks & Hirsh, 1997).
**Educators learning together.** Effective learning environments are community-centered and involve norms that encourage collaboration and learning (Bransford et al., 2000). Little (2002) wrote, “Researchers posit that conditions for improving teaching and learning are strengthened when teachers collectively question ineffective teaching routines, examine new conceptions of teaching and learning, find generative means to acknowledge and respond to differences and conflict, and engage actively in supporting professional growth” (p. 917). Interactions teachers have with their colleagues about instruction influence teacher learning and positive changes in classroom practice (Borko, 2004; Smylie, 1988).

**Standards for effective professional learning.** The National Staff Development Council published standards that connect to what is known about how adults learn best. The standards incorporate most of the characteristics of effective professional development that have been mentioned above. The 2001 standards are:

- **Context Standards**
  - Organizes adults into learning communities whose goals are aligned with those of the school and district.
  - Requires skillful school and district leaders who guide continuous instructional improvement.
  - Requires resources to support adult learning and collaboration.
- **Process Standards**
  - Uses disaggregated student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement.
• Uses multiple sources of information to guide improvement and demonstrate its impact.
• Prepares educators to apply research to decision making.
• Uses learning strategies appropriate to the intended goal.
• Applies knowledge about human learning and change.
• Provides educators with the knowledge and skills to collaborate.

• Content Standards
  • Prepares educators to understand and appreciate all students, create safe, orderly and supportive learning environments, and hold high expectations for their academic achievement.
  • Deepens educators’ content knowledge, provides them with research-based instructional strategies to assist students in meeting rigorous academic standards, and prepares them to use various types of classroom assessments appropriately.
  • Provides educators with knowledge and skills to involve families and other stakeholders appropriately.

The National Staff Development standards sum up the literature that was presented earlier in the chapter related to effective professional development. The next section of the chapter will review several of the research studies that were referenced during the synthesis of effective professional development characteristics.

A study by Garet et al., (2001) collected data from a national probability sample of 1,027 mathematics and science teachers to investigate the effects of different
characteristics of professional development on teachers’ learning. They examined structural features (traditional and “reform” types of activities, duration, and collective participation) and core features (focus on content, active learning, coherence/connected to wider set of learning opportunities). After analyzing the data, the authors ascertained what core and structural features of professional development experiences provided the greatest opportunity for learning. Results showed that professional development was likely to be of higher quality if it was both sustained over time and involved a substantial number of hours. The authors stated that longer activities included more opportunities for active learning and connections to a teacher’s goals and alignment with standards. Professional development activities that emphasized content and were connected to teachers’ other learning experiences and other reform efforts were likely to produce enhanced knowledge and skills. In addition, the coherence of professional development activities was shown to exert a positive influence on changes in teaching practice over and above the effects of knowledge and skills. An interesting finding was that when reform type activities (coaching, study groups, mentoring, etc.) and traditional activities (workshops, courses, conferences, etc.) lasted the same duration they had the same effects on reported outcomes. In other words, instead of focusing on type of activity (reform or traditional) it is more important to focus on the duration, collective participation, and the core features such as content, active learning, and coherence when planning professional development experiences.

The importance of certain core and structural features of professional development was discussed in a recent article by Desimone (2009). She proposed that the
knowledge base for what makes professional development effective has advanced to the level that a core framework can be established for studying the effects of professional development on teachers and students. The model that she suggested researchers begin to use represents interactive relationships between the critical features of professional development, teacher knowledge and beliefs, classroom practice, and student outcomes.

This core theory of action follows these steps:

1. Teachers experience professional development.
2. The professional development increases teachers’ knowledge and skills and/or changes their attitudes and beliefs.
3. Teachers use their new knowledge and skills, attitudes, and beliefs to improve the content of their instruction or their approach to pedagogy or both.
4. The instructional changes foster increased student learning.

Desimone, 2009, p. 185

*Figure 1. Conceptual framework for researching professional development*
Desimone (2009) argued that having a core set of characteristics that have been shown to work and measuring them every time professional development is studied would move the field of professional learning for teachers forward. The shared conceptual framework would allow researchers to build a consistent data set over time on aspects of teachers’ learning experiences. Researchers could more easily replicate and extend studies if a common language and constructs were used and this would facilitate comparison across studies.

To sum up this section of the chapter, there appears to be a consensus of what characteristics matter most for productive teacher learning, which will ultimately lead to improved student learning. The next section of the chapter reviews the literature linking teachers’ attitudes and professional development.

**Professional Development and Teacher Attitudes**

The research literature on effective professional development describes characteristics that contribute to successful learning for teachers. In addition, Newmann, King, and Young (as cited by Torff & Sessions, 2008) posit that the success of the professional development experience most likely depends on the characteristics of the teachers who take part in them. One characteristic that may provide insight into the success of a professional development initiative is teacher attitude. Torff and Sessions (2008) hypothesized that “an analysis combining the design features of professional development initiatives and teachers’ attitudes about these initiatives probably accounts for more of the variance in the effectiveness of professional development than either of these sets of factors alone” (p. 124). The next section of this chapter begins with a
definition of attitudes and then proceeds to review studies that involved research connecting teachers’ attitudes and professional development.

The concept of attitude includes ways of feeling, thinking and behaving (Holfve-Sabel, 2006). Myers (2008) defined attitude as “a favorable or unfavorable evaluative reaction toward something or someone (often rooted in one’s beliefs, and exhibited in one’s feelings and intended behavior)” (p. 120). Teacher attitudes can have a strong effect on teachers’ practice; teachers with positive attitudes toward an instructional practice will use it more frequently in their classroom (Donerlson, 2008; Wilkins, 2008). Reciprocally, the experience of successfully implementing an instructional practice and seeing positive results firsthand shapes teachers’ attitudes (Guskey, 2002; Knight, 2009).

An early study connecting teacher attitudes and professional development was one conducted by Brimm and Tollett (1974). The purpose of their research was to identify the types of in-service education programs currently taking place in Tennessee and to ascertain teacher attitudes toward in-service education programs. Two percent of the teachers representing each of the state’s school districts were invited to participate in the study. Six hundred forty-six teachers (65% of those invited to participate) were involved in the study and represented every school district in the state.

Data were collected via the Teacher Attitude toward In-Service Education Inventory. Teachers answered a series of 35 statements with five answer choices ranging from *strongly agree* to *strongly disagree*. Results showed that the item that received the strongest endorsement by the teachers was, “The teacher should have the opportunity to select the kinds of in-service activities which he feels will strengthen his professional
competence.” This indicated that the overwhelming majority of teachers preferred some sort of individualized professional development. A majority (73%) of the teachers indicated that too often in-service activities did not appear relevant to the needs of the teacher. In the conclusion of the article the authors recommended that in-service activities focus on the teaching and learning that makes up daily classroom life. They suggested that professional development offered within the schools may allow teachers to focus on problems which have personal meaning to them and develop a “team spirit” within the school staff. The final paragraph of the article included a recommendation that is as pertinent today as it was then: “…if teachers’ professional growth is to be taken seriously, public school administrators and teachers must pool their knowledge and resources and seek to make in-service education more responsive to the needs and interests of practicing classroom teachers” (Brimm & Tollett, 1974, p.525).

Although effective professional development has been deemed critical for teachers to be successful, it appears that many teachers do not experience effective professional learning experiences and feel professional development is a waste of time (Darling-Hammond et al., 2009; Guskey, 2000; Singh & Shifflette, 1996). In simple terms, many teachers have a “bad attitude” toward professional development. Torff, Sessions, and Byrnes (2005) stated that there is a scarcity of instruments to measure teachers’ attitudes about professional development. As a consequence they developed a scale to address this need called the Teachers’ Attitudes about Professional Development (TAP) scale. The authors acknowledged that research using interview procedures presents a detailed account of the interviewees’ attitudes, but that this method is not
effective for determining the extent to which the larger population of teachers is in agreement. The TAP instrument can be employed to gather data on teachers’ attitudes from large populations and can be used to compare the professional development attitudes of different groups of teachers.

The development of the TAP began with the researchers drafting 44 statements that reflected attitudes about teachers’ professional development. The statements included a range of professional development formats such as workshops, conferences, books and professional development outcomes such as growth as a teacher and improvement of classroom instruction (Torff et al., 2005). A full description of the development of the TAP instrument is presented in Chapter 3, as this scale along with a modified scale called the Teachers’ Attitudes toward the Professional Development Plan was utilized in the present research study. The Teachers’ Attitudes about Professional Development (TAP) instrument was used in a series of research studies focused on how teacher characteristics such as age, gender, years of teaching, and level of education correlated with teachers’ attitudes about professional development (Torff & Sessions, 2008).

Torff and Sessions (2008) reported data from their study that used the TAP instrument with 214 elementary through secondary teachers in New York State. The variables they investigated were age, years of teaching experience, gender, grade level, and level of educational attainment. The results indicated that teaching experience was the best predictor of teachers’ attitudes about professional development. Teachers’ attitudes about professional development seemed to be grouped into three phases: increasing, decreasing, and then leveling out. Over the first two years of teaching,
teachers steadily grew more amenable to professional development. A gradual, steady decline occurred for teachers in the third through ninth year of their teaching careers. Then, teachers in year ten and beyond of their teaching careers had similar attitudes about professional development to those of first year teachers. Differences between elementary and secondary teachers in the first two phases were evident, with secondary teachers being significantly less supportive of professional development. Among all teachers, gender and level of educational attainment were not associated with attitudes about professional development. The information provided by using the TAP instrument can be enlightening for those who are designing and implementing professional development initiatives.

Spencer-Chapman (2008) did not use the TAP instrument; however, she did compare the results of her study to the findings from Torff and his colleagues. One purpose of her research was to identify changes in teachers’ attitudes as a result of their participation in professional development activities related to arts integration. Spencer-Chapman administered a survey to sixth through eighth grade teachers representing a variety of subject areas from two middle schools within two school districts located in the Washington, DC, metropolitan area. From the 55 teachers who responded, she found that educators with more teaching experience tended to have more positive attitudes toward the professional development initiatives related to arts integration. As the teachers’ experience increased, so did their positive perceptions about professional development related to arts integration. This was especially evident beginning with five years of experience. This is in contrast with the Torff and Session’s (2008) study that found that
teachers were most amenable to professional development between years two and three of their teaching careers and after this time they were less amenable. Spencer-Chapman hypothesized that teachers with more experience have a more clear perspective about the importance of professional development related to arts integration.

One purpose of professional development is to enhance the attitudes of educators (Guskey, 2000; Sparks & Loucks-Horsley, 1989). Teachers’ attitudes are important because they influence what occurs in the classroom (Donerlson, 2008; Wilkins, 2008).

The purpose of the study by Wilkins (2008) was to investigate elementary teachers’ level of mathematical content knowledge, their attitudes toward mathematics, beliefs about the effectiveness of inquiry-based instruction and use of inquiry-based instruction. The participants included 481 elementary teachers from two school districts taking part in a professional development project focusing on the implementation of the NCTM standards-based mathematics curricula. All data were collected at the beginning of the professional development.

An interesting finding from the study was that although the number of math courses a teacher had taken did not have a direct relationship with instructional practice, it was found to have an indirect influence through teachers’ attitudes. As attitudes are often rooted in beliefs, another finding from Wilkins (2008) research should be noted. Some teachers’ beliefs (importance of inquiry-based instruction) did not align with their actions (frequent use of inquiry-based instruction in the classroom). Another finding was that teachers’ attitudes were found to positively affect teachers’ beliefs, which added to the total effect of attitudes on instructional practice. Wilkin’s wrote, “Consistent with
Ernest’s theoretical model (1989), knowledge, beliefs, and attitudes were all found to influence instructional practice. In particular, teachers’ attitudes toward mathematics and mathematics teaching were found to have a positive effect on teachers’ use of inquiry-based instructional practices” (p.156). Overall, teachers with more positive attitudes toward mathematics were more likely to believe in the effectiveness of inquiry-based instruction and use it more frequently in their classroom. Wilkins theorized that whereas a teacher’s level of knowledge in mathematics likely influences his or her mathematical attitude, it is also likely that a teacher’s mathematical attitudes influence his or her attainment of content knowledge.

Another study about teachers’ attitudes toward implementation of an instructional method was one conducted after teachers participated in a professional development workshop on Bloom’s mastery learning instructional strategies. Guskey (1988) surveyed 120 teachers about their attitudes toward the implementation of mastery learning after a one-day workshop. Guskey found that teachers with positive attitudes toward implementing the innovation were also those teachers who demonstrated a high level of efficacy, liked teaching, and felt confident in their teaching abilities. They viewed adopting the innovation as not very difficult to do, as it was not very different from their existing practice. It may be that teachers’ tend to possess more positive attitudes toward an innovation when it is fairly easy to implement because it is not a huge leap from their current practice. Knight (2009) stated that implementation increases when barriers are removed to make the new practice easier to carry out. If the teacher can successfully adopt the new practice, then positive attitudes may result.
Guskey (2002) suggested that a significant change in teachers’ attitudes occurs primarily after they see improvements in student learning. Knight (2009) corroborated this idea when he wrote, “When it comes to change, teachers have to drink the water, so to speak, before they will believe” (p. 510). This leads to a model of teacher learning that begins with a professional development experience bringing about a change in classroom practice which leads to a change in student learning outcomes, which results in a change in teachers’ beliefs and attitudes. This model is illustrated nicely in a study conduct by Bonner (2006).

The purpose of Bonner’s (2006) study was for the researcher to engage in a collaborative action research project with two experienced teachers and discover the factors in the process that contributed most strongly to the professional growth of these teachers. The participants were two fifth grade teachers in an elementary school in a suburban school district in Los Angeles County. Time within the workday and time across the entire school year were provided for the teachers to participate in this professional development model. The teachers were concerned about their students’ low performance in mathematics on the Stanford Achievement Test. In addition, one of the teachers expressed concern that she lacked confidence in her knowledge of the subject of mathematics. After closely analyzing student test data the teachers saw that their students were weak in the area of mathematics problem-solving and this became the focus of their collaborative action research project. The researcher observed that as teacher learning in mathematics developed, instructional expertise increased, which led to higher student achievement, which led to a transformation of the teachers’ attitudes toward mathematics.
instruction. The researcher noted that in addition to the change in teachers’ attitudes toward mathematics instruction, the teachers developed a strong sense of self-efficacy in teaching this subject.

A study that directly sought to investigate teachers’ attitudes toward professional development was conducted by Gwin (2008). One purpose of the study was to investigate whether teacher participation in job-embedded professional learning teams (PLT) would improve their attitudes toward professional development. The researcher hypothesized that implementing professional learning communities as a model of professional development would positively engage teachers in their own learning and improve their attitudes toward professional development. The case study of a single high school with 1096 students and 115 faculty and staff took place in Massachusetts. The researcher, who was also the principal, collected data through semi-structured interviews with five department chairs, an online questionnaire answered by 57 teachers, field observational notes, reflective journal, and school documents. In the first year of implementing the PLT professional development model, the regular staff meeting times and the early release days were used for working in learning teams. The teams met once a month for 75 - 180 minutes.

Findings indicated that the teachers felt that the previous professional development offered by outside consultants did not meet their needs and they had negative attitudes toward this form of professional development. Survey data collected after a year of implementation showed that 77% of the teachers felt that working in PLTs played a more significant role in impacting teaching and learning in their classrooms than
the usual forms of professional development or regular department and faculty meetings. The interviews with the department chairs also reflected a positive change in teachers’ attitudes toward professional development. The department chairs noted that faculty members felt the PLT meetings were a much more productive and meaningful use of time than regular faculty or department meetings.

Gwin (2008) connected his findings in regard to teachers’ positive attitudes toward PLTs to what is known about effective professional development: The PLT work was directly connected to the teaching and learning that takes place in the classrooms, the PLT work increased the sense of collegiality and collaboration in the departments, and PLTs took into account the developmental stage and experience of each individual teacher. Especially noteworthy is that the findings suggested that the collaborative nature of the PLC model of professional development had a positive effect on teacher attitude toward professional development. Based on the study, Gwin shared several implications for practice when implementing the PLT model of professional development to improve teachers’ attitudes toward professional learning:

- Ongoing and embedded in the daily work of teachers. PLT meetings need to be an integral part of the regular school day and not relegated to after school status.
- Directly connected to the instruction and learning taking place in the teachers’ classrooms.
- Enduring support of the principal and the school leadership team.
• The principal must develop a sense of shared leadership with the staff so the faculty feels a sense of collective responsibility for meeting the educational goals of the school. For this to happen, teachers need autonomy in forming their PLT teams and developing team goals. While the teachers have independence to do this, they must remember that their team goals should reflect the shared mission and vision of the school.

This section of the chapter illustrated several important points in the research connecting teacher attitudes and professional development. Teachers may have positive attitudes toward a professional development experience if it is something that is not too far from what they are already doing in practice and that they feel they can successfully implement what was learned as a result of the professional development experience. Conversely, teachers may indicate a negative attitude toward a professional development experience if they do not believe they will be able to successfully implement the new learning in their classroom. Teachers participating in yearlong professional development experiences with time embedded in the daily schedule for collaboration and time over the course of the year to implement the new learning in the classroom have demonstrated positive attitudes toward this type of professional development. Also, teachers feel professional development to be worthwhile when it is based on their needs and focused on the teaching and learning that occurs daily in the classroom. Successfully implementing an instructional practice and seeing positive results firsthand shapes teachers’ attitudes. Reciprocally, teachers’ attitudes can have a strong effect on their
practice; teachers with positive attitudes towards a new instructional practice will use it more frequently in their classroom.

Attitudes are developed in situations where people interact with or observe the behavior of others (Baron et al., 2008). This social learning often causes people to adjust their attitudes so as to hold views closer to those of others who they value and with whom they identify. The social learning that takes place in a school is influenced by the school culture, which further influences the attitudes that teachers adopt.

People come to define their workday realities through a set of shared assumptions about the appropriate attitudes and behaviors constructed within them. Meanings of work are exchanged, negotiated, and modified through the communications people have with, or the observations they make of, others. Thus teachers learn through everyday interactions how to name and classify things, and in that process learn how they are expected to behave with reference to those things. (Rosenholtz, 1991, p. 3)

The next section of the chapter reviews the theoretical framework for this study, school culture. It is interesting to note the reciprocal relationship between attitudes and school culture. The culture of the school is a powerful influence on teachers’ attitudes (Boyd, 1992). Reciprocally, teachers’ attitudes influence the norms of the school culture.

**Theoretical Framework: School Culture**

Barth (2002) wrote that school culture is a “complex pattern of norms, attitudes, beliefs, behaviors, values, ceremonies, traditions, and myths that are deeply ingrained in the very core of the organization” (p. 7). Simply put, culture is “the way we do things
around here” (Bower, as cited by Deal & Peterson, 1999, p. 3). Wagner and his colleagues at the Change Leadership Group defined culture as “the shared values, beliefs, assumptions, expectations, and behaviors related to students and learning, teachers and teaching, instructional leadership, and the quality of the relationships within and beyond the school. Culture refers to the invisible but powerful meanings and mindsets held individually and collectively throughout the culture” (Wagner et al., 2006, p. 102).

To Edgar H. Schein, a highly regarded scholar of organizational culture and leadership, the most fascinating aspect of culture is that it “points us to phenomena that are below the surface, that are powerful in their impact but invisible and to a considerable degree unconscious” (Schein, 2004, p. 8). The behavior that results is easy to see but the causes of that behavior are not. He drew the analogy that culture is to a group what personality or character is to an individual. Just as our personality guides our behavior, culture guides and constrains the behavior of members of a group through the shared norms of the group (Gruenert, 2008; Schein, 2004). The shared norms and values of a group create a tightly coupled school organization that has more influence than the formal rules of the school (Sergiovanni, 1989).

Sergiovanni (1994) wrote about the powerful influence of shared values and ideals in binding teachers together within the school community. The cultural connections in the school community bond the principal, students, and teachers together into a “we”. This “we” usually comes to share common sentiments and traditions that are sustaining (Sergiovanni, 1994). The values and norms that go along with conceptions of excellence in teaching and learning grow out of practice. If we “grab people by their
practice, their hearts and minds will follow” (Elmore, 2002a, Better Benchmarks, para. 3). Successful schools possess a widely shared sense of values and purpose (Peterson, 2002; Wilson, 2008) with a professional culture that reinforces a strong educational mission (Deal & Peterson, 1999). Shared values and beliefs over time often become the underlying assumptions that permeate the way we do things around here. Reciprocally, the shared, tacit, taken-for-granted assumptions manifest through shared espoused beliefs and values (Schein, 2004). Schein wrote that culture is a set of basic assumptions that “defines for us what to pay attention to, what things mean, how to react emotionally to what is going on, and what actions to take in various kinds of situations” (p. 32). He cautioned that when studying culture espoused beliefs and values may only reflect rationalizations or aspirations. Schein advised that to really understand a group’s culture, “one must attempt to get at its shared basic assumptions and one must understand the learning process by which such basic assumptions came to be” (p. 36).

Although there is no one way of looking at and understanding school culture (Sarason, 1971) many models, types and categories of school culture have been proposed. The following section of this chapter describes several of these models, types and categories of school culture.

**Models, Types and Categories of School Culture**

Peterson (2002) described school culture as being either positive or negative. In positive school cultures teachers, administrators, and students value learning. There is a norm of continuous learning and improvement and all educators feel responsible for the learning of all students in the school. Collaborative, collegial relationships are valued and
opportunities are provided for reflection, collective inquiry, and sharing about teaching and learning. On the other hand, some schools possess negative school cultures. These “toxic” cultures exude norms and values that hinder growth and learning. There is a lack of purpose and often students are blamed for poor performance. Collaboration is not the norm and often toxic cultures have hostile relationships among the staff. These schools are not healthy for educators or students. Peterson (2002) recommended that the staff and the principal can work together to address negativity and shape a more positive culture for the school.

The positive and negative cultures described by Peterson (2002) echo the findings of a study conducted by Rosenholtz (1991). The purpose of the study was to investigate the ways that the structure of teachers’ daily experiences affected their beliefs, cognitions, and behaviors and also to investigate the reciprocal effect of those beliefs, cognitions, and behaviors on their school’s social organization. Based on her research, Rosenholtz classified a school as a high-consensus, forward-moving, learning-enriched workplace or a low-consensus, stuck, learning impoverish workplace. The culture in the former workplace developed through shared teaching and learning goals, norms of collaboration among teachers, and “an abundant spirit of continuous improvement that seemed to hover schoolwide, because no one ever stopped learning to teach” (p. 208).

Saphier and King (1985) stated that if certain norms of the school culture are strong, there will be significant and continuous improvements in instruction. If the norms are weak, instructional improvements will likely be infrequent and random. The cultural norms that Saphier and King refered to are listed below. They recommended that the
norms be supported where they already exist. If they do not exist, then the norms can be built by leaders and staff. The cultural norms that affect school improvement are:

1. Collegiality
2. Experimentation
3. High expectations
4. Trust and confidence
5. Tangible support
6. Reaching out to the knowledge bases
7. Appreciation and recognition
8. Caring, celebration, and humor
9. Involvement in decision making
10. Protection of what’s important
11. Traditions
12. Honest, open communication

(Saphier & King, 1985, p. 67)

Recently a new model of school culture was proposed by Schoen and Teddlie (2008). The model is based on a literature review that included variables, attributes, characteristics, terms and concepts found to indicate school culture. From the literature review four separate groups of indicators of culture emerged. The authors referred to these as “The Dimensions of Culture”. The four dimensions in this integrated model of school culture are (a) Professional Orientation, (b) Organizational Structure, (c) Quality of the Learning Environment, and (d) Student-Centered Focus. The term orientation was chosen
for the dimension Professional Orientation because it connotes inclusion of psychological and attitudinal constructs. The authors cited that the majority of previous studies used formal organizational factors and that few studies used the culture of schooling in terms of teachers’ attitudes and perceptions. In theorizing the Professional Orientation dimension of school culture Schoen and Teddlie stated that it refers specifically to indicators that educators are individually or collectively involved in professional growth centered on student learning. Professional Orientation incorporates the following:

- professionalism (Louis, Kruse, & Associates, 1995)
- professional learning community (DuFour & Eaker, 1998; Newmann & Wehlage, 1995)
- norms of collegiality (Little, 1982)
- teacher professionalization (Darling-Hammond, 1990; Little, 1990)
- collaborative cultures (Lieberman, 1990)
- organizational learning (Argyris & Shon, 1976)
- learning organizations (Senge et al., 2000)

Schoen and Teddlie (2008) conducted an “intellectual validation” by comparing their model to existing frameworks with established utility. They wrote, “Theoretically, culture is a distinguishing factor between effective and ineffective schools; therefore, if these dimensions embody the essence of school culture, they should have predictive validity for determining the effectiveness of school improvement efforts” (pp. 142-143). Schoen and Teddlie compared their model to ten other works which are listed below:

- Getzels and Guba’s organizational theory (1957)
- Murphy’s descriptions of restructuring (1991, 1992)
- Levine and Lezotte’s characteristics of effective schools (1990)
- Stoll and Fink’s categories of effective schools (1996)
- Teddlie and Reynold’s process of effective schools (2000)
- Fullan’s inside story of school improvement (2000)
- Hopkins’ Improving the Quality of Education for All (IQEA) propositions (1994)
- Hopkins and Ainscow’s relationships between school and classroom conditions (1993)
- Schein’s levels of organizational culture (1985, 1992)

Schoen and Teddlie (2008) found that the new Dimensions of School Culture model was consistent with all the works mentioned above. The authors suggested that their theoretical model, based on the presumption that a dominate pattern of behaviors and set of beliefs exists in each school, could be used as a guide to create instruments and research designs to assess and compare school cultures in efforts to improve schools.

Improving schools within a learning organizational culture was discussed in Schools that Learn written by Peter Senge in collaboration with 112 researchers and practitioners. Senge et al. (2000) and his colleagues proposed five key disciplines of organizational learning. To the extent that these disciplines are built into the ongoing practice of educators and adopted by the individuals and groups within the school, a
culture of learning is established. The disciplines are (a) Personal Mastery, (b) Shared Vision, (c) Mental Models, (d) Team Learning, and (e) Systems Thinking. Although all these disciplines work together, the researcher would like to highlight Team Learning:

Team Learning: This is a discipline of group interaction. Through such techniques as dialogue and skillful discussion, small groups of people transform their collective thinking, leaning to mobilize their energies and actions to achieve common goals and drawing forth an intelligence and ability greater than the sum of individual members’ talents. Team learning can be fostered inside classrooms, between parents and teachers, among members of the community, and in the “pilot groups” that pursue successful school change. (Senge et al., 2000, pp. 7-8)

As a result of examining the models, types and categories of school cultures discussed in the literature review above, one theme is common to all: collaboration. The next section of this chapter will discuss collaborative school culture, as it is the type of school culture that undergirds the instrument that was employed in the current research study.

Collaborative School Culture

One type of school culture that has been shown to have a positive impact on schools is a collaborative school culture (Ashton & Webb, 1986; Barth, 2006; Fullan & Hargreaves, 1992; Little, 1982; Rosenholtz, 1991; Saphier & King, 1985). Gruenert (2005) wrote, “Collaborative school cultures – schools where teacher development is facilitated through mutual support, joint work, and broad agreement on educational
values (Fullan & Hargreaves, 1996; Little, 1990) – have been presented as the best setting for learning for both teachers and students” (p. 43). Collaboration involves shared work (Bryk, Camburn, & Louis, 1999). Teachers working together involves “an array of specific interactions by which teachers discuss, plan for, design, conduct, analyze, evaluate, and experiment with the business of teaching” (Little, 1982, p. 338).

Collegiality, one aspect of a collaborative school culture has been shown to affect teacher learning positively (Barth, 1990; Borko, 2004; Deal & Peterson, 1999; Little, 1982; Rosenholtz, 1991; Saphier & King, 1985; Sergiovanni, 1994; Smylie, 1988). This collaborative, collegial work among teachers also involves teachers adjusting their teaching as a result of collaborative group work (McLaughlin & Talbert, 2006; Saphier & King, 1985). A collaborative school culture encourages norms of collegiality. Fullan (1990) wrote,

Norms of collegiality refer to the extent to which mutual sharing, assistance, and joint work among teachers is valued and honored in the school. As mentioned earlier, there is nothing particularly virtuous about collaboration per se. It can serve to block change or put down students as well as to elevate learning. Thus, collegiality must be linked to norms of continuous improvement and experimentation in which teachers are constantly seeking and assessing potentially better practices inside and outside their own school (and contributing to other people's practice through dissemination). (p. 17)
In a collegial culture, adult learning is energized and more likely to be sustained (Barth, 1990). When there is a prevailing norm of collegiality, staff development seems to have the greatest prospects for influence (Little, 1982). In turn, this collaboration with colleagues leads to higher levels of student achievement (DuFour, 2005).

A recent study investigated the link between teacher collaboration and student achievement (Goddard, Goddard, & Tschannen-Moran, 2007). The purpose of the research was to empirically test the relationship between a theoretically driven measure of teacher collaboration for school improvement and student achievement in mathematics and reading. The study involved 452 teachers and 2,536 fourth grade students in 47 elementary schools in one large school district in the Midwestern United States. The data were collected via a survey completed by teachers at their school site and from the fourth grade students’ scaled scores on state-mandated mathematics and reading assessments. Statistical controls were employed for student characteristics (prior achievement, race, gender, and SES, as indicated by free and reduced-price lunch status) and for school context (SES, minority proportion, and size). With these controls in place data indicated that teacher collaboration for school improvement was a statistically significant predictor of difference among schools in both student mathematics and reading achievement.

Other researchers have pursued the link between teacher collaboration and student achievement. Herndon (2007) and Fraley (2007) used the School Culture Survey (Gruenert, 1998) to collect data on the collaborative nature of school culture and its influence on student achievement. The next section of this chapter describes the School Culture Survey and then briefly discusses several of the studies that applied the
instrument to investigate the relationships between student achievement and a collaborative school culture. Although the present research study did not directly pursue the link between teacher collaboration and student achievement, it may be inferred that a collaborative school culture influences teacher learning positively, which ultimately influences student learning.

**Collaborative School Culture Survey.** Many researchers have noted the importance of a collaborative school culture to the teaching and learning that takes place within a school (Barth, 1990; DuFour, 2005; Goddard et al., 2007; Little, 1982). Gruenert (1998) saw a need for a survey to be developed that would measure the culture of a school with an emphasis on the collaborative nature of school culture. He suggested that a survey could be used in conjunction with qualitative methods to provide insight for educators into the culture of their school. Based on the literature related to school culture, effective school cultures, and collaborative school cultures, Gruenert, along with his doctoral advisor Jerry Valentine, developed an instrument that was administered to 632 K-12 teachers in Missouri. Through factor analysis, six factors were identified. These collaborative school culture factors are:

- **Collaborative Leadership:** Measures the degree to which school leaders establish and maintain collaborative relationships with school staff. The leaders value teachers' ideas, seek input, engage staff in decision-making, and trust the professional judgment of the staff. Leaders support and reward risk-taking and innovative ideas designed to improve education for the students. Leaders reinforce the sharing of ideas and effective practices among all staff.
- Teacher Collaboration: Measures the degree to which teachers engage in constructive dialogue that furthers the educational vision of the school. Teachers across the school plan together, observe and discuss teaching practices, evaluate programs, and develop an awareness of the practices and programs of other teachers.

- Professional Development: Measures the degree to which teachers value continuous personal development and school-wide improvement. Teachers seek ideas from seminars, colleagues, organizations, and other professional sources to maintain current knowledge, particularly current knowledge about instructional practices.

- Collegial Support: Measures the degree to which teachers work together effectively. Teachers trust each other, value each other's ideas, and assist each other as they work to accomplish the tasks of the school organization.

- Unity of Purpose: Measures the degree to which teachers work toward a common mission for the school. Teachers understand, support, and perform in accordance with that mission.

- Learning Partnership: Measures the degree to which teachers, parents, and students work together for the common good of the student. Parents and teachers share common expectations and communicate frequently about student performance. Parents trust teachers and students generally accept responsibility for their schooling.
The development of the School Culture Survey is described in more detail in Chapter 3, as this instrument was used in the current research study. The next section of the chapter describes four studies that employed the School Culture Survey.

The purpose of the study by Gruenert (2005) was to investigate the salience of collaborative school cultures relative to student achievement. The School Culture Survey was used to collect data from educators in 81 schools in Indiana. The sample was comprised of Elementary ($n = 35$ schools: 942 surveys), Middle ($n = 18$ schools: 481 surveys) and High ($n = 28$ schools: 1,327 surveys). The student achievement data came from the state standardized tests for mathematics and language arts. The results showed that the more collaborative schools tended to have higher student achievement. When looking at both mathematics and language arts achievement the highest statistically significant correlations came from three factors within the School Culture Survey: (a) Factor 3 (Professional Development), (b) Factor 4 (Unity of Purpose), and (c) Factor 6 (Learning Partnership). In analyzing the scores for all six factors of school culture, the elementary schools had the highest scores and the high schools had the lowest scores. Gruenert stated that correlation research reveals links, not causality. It could be that high test scores foster collaborative cultures. Gruenert’s study was replicated by Farley (2007) and is described next.

One purpose of the study by Fraley (2007) was to investigate the correlation of the factors of collaborative cultures relative to student achievement in elementary,
middle, and high schools in Indiana. Of the 127 school invited to participate, 35 completed usable surveys. One data source came from the results of the School Culture Survey analyzed at the school level (N = 35). Another data source was student achievement scores in mathematics and language arts on the state standardized tests. Findings showed a statistically significant (p < .05) correlation between Factor 1 (Collaborative Leadership) and student achievement in mathematics and language arts. There was also a statistically significant (p < .01) correlation between Factor 6 (Learning Partnership) and student achievement in mathematics and language arts. The School Culture Survey was also used in a study conducted by Herndon (2007).

Herndon (2007) sought to discover if any relationships existed between the factors of school culture and student achievement in mathematics and communication arts. He also investigated whether there were relationships between the factors of school culture and the factors of servant leadership. The participants were 677 teachers from 62 elementary schools in Missouri. Data were collected via the School Culture Survey, the Servant Leadership Assessment Instrument and state standardized tests. Data from all sources were aggregated at the school level. The findings indicated that school culture had a significant influence on student achievement. Factor 3 (Professional Development), Factor 4 (Unity of Purpose), and Factor 6 (Learning Partnership) had significant correlations with communication arts achievement. Only Factor 6 (Learning Partnership) had a significant correlation with the mathematics achievement data. One interesting finding was that when controlling for enrollment and free/reduced lunch, the free/reduced
lunch school context factor significantly influenced student achievement more so than the factors of servant leadership or the factors of school culture.

Although not relating to student achievement, the School Culture Survey was used by Curtis (2005) to measure organizational efficacy by examining the shared values, beliefs, patterns of behavior and relationships in the school. One purpose of her research was to determine which efficacy (general, teacher, or organizational) can best predict new teacher retention. Curtis also investigated relationships between perceived collegial relationships and job satisfaction to new teacher retention. Participants in her research included 218 middle and high school teachers in twenty schools with up to five years of total teaching experience. Data from the School Culture Survey were analyzed at the individual teacher level. One key finding from her study was that Factor 1 (Collaborative Leadership) and Factor 2 (Teacher Collaboration) were significant predictors of new teacher retention in five years. Curtis theorized that meaningful collegial relationships are essential for meeting the needs of new teachers and should be considered a possible solution for increasing new teacher retention.

This section of the chapter reviewed research studies that have used the School Culture Survey. The next section of the chapter describes research linking school culture to teacher learning within teacher evaluation systems that are designed to promote professional growth.
Influence of School Culture on Teacher Learning within a Teacher Evaluation System

Barth (2002) nicely sums up the powerful importance of school culture: “A school’s culture has far more influence on life and learning in the schoolhouse than the president of the country, the state department of education, the superintendent, the school board, or even the principal, teachers, and parents can ever have” (p. 6). The culture of a school can influence everything from the expectations that are held for student learning to innovations such as a teacher evaluation system designed to promote professional growth. The level of success of this type of teacher evaluation system most likely depends on a healthy, growth-oriented school culture that is receptive to professional learning opportunities and is based on assumptions of continuous learning for all. Saphier (1993) wrote that no single practice has more capacity for strengthening or weakening the culture, or more powerfully condenses the way teachers experience the cultural norms of their school, than evaluation. Danielson (2008) emphasized the importance of a culture of inquiry and ongoing learning when she stated that for a teacher evaluation system to genuinely lead to professional learning for teachers, the culture must support it. The importance of school culture is highlighted in a study of four school districts by McLaughlin and Pfeifer (1988). They found that “creation of a culture for evaluation is the first step in establishing a strong teacher evaluation program. The second and ongoing issue is sustaining and strengthening that culture. This task requires consistent, express attention from district leadership” (p. 81). The following section describes three research
studies that link school culture and teacher evaluation systems designed to promote professional learning for teachers.

This first study is one conducted by McKay (1998). The main purpose of his study was to explore the school culture associated with a new, growth-oriented evaluation system. A single school case study and qualitative methodology was employed with data coming from 17 educators. Data sources included documents related to the new teacher evaluation system and interviews. In addition to the teachers and administrators working at the middle school, the School Committee Chair, three district level administrators, and two union leaders were interviewed. McKay’s study quoted a teacher saying,

You cannot have an evaluation system (that works to support good teaching) if it doesn’t create collegiality and exchange in communication. That is the essence. The evaluation system only works as one other tool, one other way, one other vehicle, to encourage dialogue, to encourage discussion, to spark thinking. (p. 91)

The major finding from McKay’s study indicated that the school culture cultivated an environment where an evaluation system that supported opportunities for experimentation and growth could take place. It was interesting to note that the school where the research was conducted was working on the template for the new evaluation system for the state of Massachusetts.

The following study by Wagner and Hill (1996) investigated teachers’ perceptions of the effectiveness of a reflective, growth-oriented new Professional Teacher Evaluation Model in Tennessee. The model was designed to encourage reflective practice and allow
teachers to become self-directing, self-evaluating, and self-correcting. The focus was on professional growth, not accountability. The participants included 52 tenured elementary and middle school teachers who were scheduled for evaluation during the 1994-1995 school year. In addition, nine principals participated in part of the study. Data were collected via pre and post surveys, interviews, observations, and a review of reflective journals and narrative reports. One finding from the qualitative data analysis was that several critical elements emerged that influenced the linking of teacher evaluation, professional growth, and motivation. These critical elements fell into four major categories: (a) characteristics of the culture, (b) characteristics of the administrator, (c) characteristics of the teachers, and (d) characteristics of the process. The researchers found that the culture of the school had the greatest impact on the effectiveness of the growth-orientated approach to evaluation. Based on their research, the authors made the following recommendations:

- The culture of the school should be assessed before implementation of the Professional Teacher Evaluation Model, to determine the level of trust and collaboration in the environment. When necessary, steps should be taken to develop a culture supportive of growth and development.

- Although the major responsibility is on the teacher to set challenging goals and to develop action plans and activities for achieving those goals, it is recommended that principals take seriously their responsibility to provide frequent feedback and support. Informal classroom observations and
opportunities for professional dialogue are recommended as integral parts of the evaluation process.

Following is another study that highlights the influence of school culture on teacher learning within a teacher evaluation system. In addition to school culture, the study also connects to research discussed earlier in this chapter regarding attitudes and best practices in professional development such as alignment with school goals, teacher collaboration, and reflection. In the following case study Lofton, Hill, and Cladet (1997) sought to identify the factors facilitating and impeding the implementation of a state-mandated teacher evaluation system with the purposes of professional development and school improvement. The study took place in a wealthy rural elementary school in Louisiana during the first year of implementation of the new evaluation system called STAR, The System for Teaching and Learning Assessment and Review. STAR “was developed and implemented in the state of Louisiana as a basis for assessing the quality of teaching and learning in Louisiana’s classrooms and to meet requirements of the Louisiana Teaching Internship (LTIP) and Statewide Teacher Evaluation (LTEP) Programs” (Lofton et al., 1997, p. 141). Although the system was linked to certification, the ultimate goal was to enhance teaching and learning and school improvement. The system was based on the belief that ongoing professional development embedded in the everyday life of the school with teachers reflecting on their own practice and working collaboratively with their principal, colleagues, and students at the classroom and school level improves learning for all. In the elementary school where the study took place
norms of teaching as an individual enterprise prevailed and the teachers had little experience collaborating for the purpose of improving teaching and learning.

Two of the three members of the university-based research and development team worked with the school on a regular basis, with the other member assisting periodically over the course of a year. All three had been involved in the development of the STAR system. The principal of the school assisted the research team with some of the data collection. Quantitative data were collected at the class level for analyzing the quality of teaching and learning at the beginning and end of the school year. Qualitative data were collected via teacher journals and lesson plans, researchers’ written notes from observations, post observation conferences, interviews, and videotaped teaching segments in order to gain insight into teachers’ perceptions of the system as a means for professional growth throughout the implementation year. In describing the study, Lofton et al. (1997) wrote,

In keeping with the collaborative, reflective improvement model on which the study was based, three phases of change activities were provided and monitored: (1) preparation activities that encouraged teachers to think systematically about their practice and its impact on student learning, (2) implementation activities that helped teachers add to their repertoire of proven practices by trying out new techniques in collaboration with others, and (3) integration activities that were designed to help teachers reflect on and learn from these experiences and use this knowledge in seeking new and better ways of enhancing the learning of students. (pp. 144 – 145)
As the study unfolded it was evident that the culture of the school assumed that teacher evaluation was for certification and licensure and did not perceive the new framework of the teacher evaluation system as a process with the potential to enhance professional practice. Although teachers were provided with a six-hour orientation program, the information was not sufficient to influence the negative attitudes one of the teachers expressed toward the system. It was not until later in the year when the teacher had planned, implemented, and videotaped a lesson designed to support the school goal of developing student thinking skills that she began to see how the many components and indicators of the evaluation system could be used in her classroom to improve her practice. The authors of the study revisited this particular teacher throughout the article “to demonstrate a teacher in transition from considerable negativism about a new innovation to seeing its possibilities for enhancing teaching and learning” (Lofton et al., 1997, p. 148). A strong influence on the teacher’s attitude shift occurred when she saw the impact her improved teaching had on student learning.

Another valuable learning experience that teachers consistently rated as beneficial was the monthly small group session. In these collaborative sessions the teachers discussed the components of the STARS framework, asked questions, shared ideas and looked at student data. The researchers provided guidance in helping the teachers become reflective practitioners as they analyzed their practice and thought about what worked and why it worked. As the teachers became more accustomed to collaborating and reflecting and saw the benefit of these actions, they asked for more time to meet with colleagues. Slowly the norms and values of the group began to change as collaboration and reflection
became part of the teachers’ practice. However, for the most part teachers viewed school-based professional development as “extra work” rather than an ongoing responsibility, an integral part of the teaching profession. The authors noted that changes in the deep underlying structures of the school take time and that one year is not enough time.

The teacher evaluation system along with leadership from the research team and the school principal were instrumental in building a common knowledge base and guided conversations with a common vocabulary about teaching and learning. Although developing quality instruments and procedures are essential, they are not enough (Lofton, et al., 1997). A critical element in the implementation of a teacher evaluation system focused on teacher professional growth is that the environment must be deliberately structured to foster a school culture of collaboration and reflection.

The studies described above highlight the central role school culture plays in the success of an evaluation system designed to support teachers’ professional learning. The study conducted by this researcher continues this chain of research. As the researcher’s study focused on the Professional Development Plan (PDP) as a model for professional growth within a district’s evaluation system, it is important to situate the PDP within the teacher evaluation system as a whole. The next section of this chapter provides a brief overview of teacher evaluation systems designed with the dual purpose of accountability and professional growth.

**Teacher Evaluation Systems for Accountability and Professional Growth**

The primary purposes of a teacher evaluation system are accountability and professional growth (Duke, 1990; Danielson & McGreal, 2000; Stiggins & Duke, 1988;
McLaughlin & Pfeifer, 1988). Darling-Hammond (1990) shared that teacher evaluation systems can be designed and implemented to guide professional development and influence motivation. How effectively the teacher evaluation system impacts teacher learning is based in part on the attitudes of the teachers participating in the system. McLaughlin and Pfeifer (1988) pointed out that the success of any teacher evaluation system depends on the opinions teachers have about the system. If teachers don’t trust that the system is fair and the process worthwhile, then little benefit will be realized. The attitudes necessary to enable a teacher evaluation system to be successful for both accountability and professional growth are lacking in many schools (McLaughlin & Pfeifer, 1988).

Stiggins & Duke (1990) highlighted the work of several states and numerous school districts in which evaluation for accountability and evaluation for professional development were developed to cycle over several years. For example, during the period between evaluations for accountability purposes, teachers engaged in individualized professional development activities. “While the results of these activities are evaluated, the purpose of the evaluations is to provide formative feedback rather than a summative judgement” (Stiggins & Duke, 1990, p. 129). McColskey and Egelson (1993) defined formative evaluation as “A system of feedback for teachers that is designed to help them improve on an ongoing basis” (p.2), whereas summative evaluation is, “A system of feedback for teachers that is designed to measure their teaching competence” (p. 2). Peterson (2000) posited that it may be nearly impossible to accomplish both formative and summative evaluation at the same time. For example, teachers may want student
feedback from a survey of students in their classes to inform practice (formative), but would probably be cautious about giving the survey if the results were made public (summative).

Research by McColskey and Egelson (1993) and by Kimball (2002a) investigated school districts in which the teacher evaluation systems were designed to involve formative activities in some years and summative activities in other years. Kimball described the systems being implemented in three schools districts in different geographic areas in the United States as follows:

Each system was designed around three evaluation tracks, with a summative evaluation phase, a professional development or growth phase, and an intervention phase for teachers whose performance was below standard. Teachers underwent a summative assessment each year before tenure and every three to four years after tenure. (p. 251)

Teachers at different stages of their careers have different needs and different levels of skills. As such, probationary teachers, career teachers, and teachers needing intensive assistance should participate in evaluation activities that are different from one another (Danielson & McGreal, 2000). Many newly developed systems of teacher evaluation are designed to differentiate the activities, procedures, and timelines for different groups of teachers (Danielson, 2001). The Owen Public Schools’ teacher evaluation system is designed around differentiated evaluation tracks, with the PDP falling in the professional development or growth phase track. As the focus of this research project targets career teachers participating in the formative phase of a teacher
evaluation system, the PDP, it is important to know more about Professional Development Plans in other school districts as well as the Owen Public Schools.

**Teacher Professional Growth Plans**

We grown-ups engage most heartily in our own learning, learn more, and care most about our learning when we pose our own questions. (Barth, 2001, p. 39)

In the literature there are many terms that describe models similar to the Professional Development Plan such as professional growth plan, individualized development plan, individual growth plan, self-direct growth plan, personal learning plan, and professional growth and development plan. For ease in communicating the term Professional Growth Plan, which appeared to be the most common term employed in the literature, is used in this section. The next section of this paper describes Professional Growth Plans for career teachers during the non-summative year of evaluation. First, the purpose of the Professional Growth Plan is explored, followed by the steps in the Professional Growth Plan process.

**Purpose of the Professional Growth Plan**

The purpose of the Professional Growth Plan (PGP) is to provide opportunities for professional learning for teachers in order to enhance the learning of their students (Evans, 1998; Koppich, 2004; Owen Public Schools, 2008; Saphier, 1993; Washoe County School District, 2007). The PGP is based on the premise that teachers are responsible professionals and self-directed continuous learners (Fenwick, 2001). Through the PGP, teachers focus on improving instructional practice without a formal evaluation
component (Audet, 2005), which encourages teachers to experiment and take educational risks (Owen Public Schools, 2008). The Professional Growth Plan is a tool that “provides a clearly articulated plan of study that, when completed, results in the acquisition and application of new knowledge, skills, attitudes, and behaviors that improve the professional proficiency of those using the plan for the purpose of improving student achievement” (Peine, 2008, p. 2).

**Professional Growth Plan Process**

Depending on the school district, state, or province policy, a Professional Growth Plan may be planned for one year or for multiple years. For example, in Alberta, Canada the annual teacher Professional Growth Plan may be a component of a long-term, multi-year plan (Government of Alberta Education, 2008). In the Tremont Community Unit District 702 in Illinois teachers may design Professional Growth Plans that range in time from one year up to three years (Peine, 2003). The steps in the Professional Growth Plan process generally include self-assessment, setting a goal(s) for growth, determining the strategies and activities for reaching the goal(s) and anticipated evidence, implementing the plan and collecting evidence, and reflecting on learning (Adams, 1998; Newport News Public Schools, 2001; Peine, 2008). As part of the process teachers may list people or material resources they will need and determine a timeline (Danielson, 2008; Kimball 2002b; Newport News Public Schools, 2001; Southbridge Public Schools, 2009). Some districts provide an opportunity for educators to share the result of their PGPs with colleagues (Danielson, 2008; Kimball 2002b; Owen Public Schools, 2008). In addition,
some schools organize celebrations for teachers to share the learning that resulted from their Professional Growth Plans (Fenwick, 2001; Peine, 2003).

**Self-assessment leads to goal(s) for the Professional Growth Plan.** In the book, *The Educator’s Professional Growth Plan: A Process for Developing Staff and Improving Instruction* (Peine, 2008) school principal Jodi Peine argued that the cornerstone of the Professional Growth Plan Process is the personal needs assessment. She recommended that educators “(1) compare their professional practices to established professional performance standards, (2) examine and document relevant student performance data; and then after completing the first two activities, (3) look for relationships between their practice and student performance” (Peine, p. 50). Established professional performance standards, such as the National Board for Professional Standards, are used for self-assessment in Montgomery County Public Schools, Maryland (Montgomery County Public Schools, 2008) and a modified version of the *Framework for Teaching* by Danielson (1996) is used for self-assessment for the PGP by educators in Newport News, Virginia (Newport News Public Schools, 2001). Research by Kimball (2002b) found that 531 teachers (91% of the sample) used the narrative information and the descriptors of the professional performance standards to complete the self-assessment for the PGP in the Newport News Public Schools. The Washoe County School District in Nevada states that a teacher’s Professional Growth Plan should begin with reflection and self-assessment (Washoe County School District, 2007). Danielson (2008) suggested that teachers use the *Framework for Teaching* to consider their own practice compared to the levels of performance in the framework. “By circling or highlighting the statements that
best reflect one’s performance, it is not difficult to determine areas of relative weakness, those aspects of teaching that could benefit from focused attention” (p. 59).

**Setting a goal(s) for teacher growth.** Saphier (1993) has recommended setting one, two or three goals at most since targeting too many goals fragments a teacher’s efforts. Various school districts, states, and provinces have different guidelines and requirements for what constitutes an acceptable goal for a teacher’s Professional Growth Plan. In the Washoe County Teacher Performance Evaluation System a PGP must be tied to one of the performance domains based on Danielson’s (1996) *Framework for Teaching* that was not the focus of the teacher during the summative evaluation year (Kimball, 2002c). In South Carolina a teacher’s PGP, called a Research and Development Goals Based Evaluation, must include one goal but may have up to three goals. This allows for individual districts to make determinations about how many goals are required (McClain, email communication, February 8, 2010). Also, some districts in South Carolina may require that one of the goals be aligned with a district focus. For example, a district focusing on literacy may require all teachers who teach English Language Arts to have at least one literacy-based goal. PGP goal alignment with school district goals is evident in Southbridge Public Schools in Massachusetts (Southbridge Public Schools, 2009). Prince William County Public Schools in Virginia recommends that teachers align their PGP goals with the division and school goals (Bonshire, email communication, February 17, 2010). Colby’s research (2001) indicated that two personnel directors of school districts in North Carolina shared that a teacher’s Professional Growth Plan (called an Individual Growth Plan) must be based on the school improvement plan and district goals. PGP goal
alignment can also be seen in the province of Alberta where a Professional Growth Plan “reflects goals and objectives based on an assessment of learning needs by the individual teacher, shows a demonstrable relationship to the teaching quality standard, and takes into consideration the education plans of the school, the school authority, and the Government” (Government of Alberta Education, 2008, Procedures, para.3).

Aligning teacher Professional Growth Plan goals with school or district goals is not always seen as important by teachers conducting PGPs. Research by Audet (2005) that took place in one school district in British Columbia and included survey responses from 107 educators, 20 interviews, and 6 PGP document reviews found that some teachers valued the PGP as a tool to pursue their own professional learning interests and not because of the outcomes related to school or district goals. There was tension around the focus of the goal, as to if the goal should be based on a teacher’s personal interest or on a goal of the school or district. This tension was also evident in research conducted by Fenwick and Smulders (2000) that is described below. McColskey and Eglson (1993) shared the following:

Some formative teacher evaluation systems have addressed this issue of organizational versus personal interest in goal selection by including both as goal categories. That is, teachers select an area of improvement that is of personal interest, and, in collaboration with an administrator, select a goal that supports school goals as well. (p. 14)

Danielson (2008) wrote that “whether teachers’ professional growth goals reflect district or building level goals depends on whether they are suitable to the individuals
concerned” (p. 61). For example, if the school’s goal is to improve writing instruction, it probably would not be beneficial to the professional development of the physical education teacher to align an individual learning goal with this school goal.

Research by Fenwick and Smulders (2001) and Fenwick (2001) discussed how within the PGP government mandated policy teachers and administrators navigated the interests of accountability while at the same time urging individualized, continuous, reflective learning of teachers. The qualitative study was carried out in the Wescana School District (pseudonym) in Alberta. The district, with 15,700 students and a full time director of Professional Development in the central office, was chosen for the study partly due to the district’s strong belief in the value of teacher learning and consequent allocation of substantial resources to support this value. The study occurred three years after the implementation of the teacher Professional Growth Plan and involved interviews with four administrators at their respective elementary, junior high, and high schools, along with interviews with 11 teachers. Fenwick (2001) also interviewed superintendents in five other districts. The overarching research question was “How do principals and teachers negotiate the implementation of teacher Professional Growth Plans, individually and collectively”.

At this point in the chapter the parts of the study relating to goals will be addressed. Four teachers that were interviewed shared that writing goals created a focus for their teaching. One teacher stressed the personal accountability that goal setting created: “When it’s written down, you begin to relate everything that happens to that goal” (Fenwick & Smulders, 2001, p. 12). One administrator explained that it seemed
that teachers were “consciously planning for their growth, and more thinking around questions such as ‘How will I know when I get there? What will it look like?’” (p.12).

One teacher commented that it was important to celebrate the achievement of her goals at the end of the year. Several teachers mentioned that they referred to the goals in their plans frequently throughout the year. A concern that was raised was that some teachers felt vulnerable when they shared a goal (revealed a weakness) to colleagues or to a principal with power of evaluation. Another concern raised by a few of the teachers was the question of failure if a goal was not completed and that educational risk-taking may be curtailed if the goal is not carried out in a trusting environment. The district administrators responded to this concern by stressing that the learning that takes place during the PGP process can be as important as whether the goal is achieved or not (Fenwick, 2001).

Beers (2009) conducted research on the differentiated teacher evaluation system implemented throughout the state of Delaware in 2008. Surveys were returned by 3,268 teachers, 313 specialists, and 194 administrators. Interviews were conducted with 257 teachers, 28 specialists, and 36 administrators. In addition, there were two focus groups for each of the following: 12 teachers, 12 specialists and 15 administrators. From the data Beers noted some concerns raised by teachers with regard to setting goals for professional growth. Teachers were worried that if they set high goals and did not meet them, they would be placed on an improvement plan (this was not the case, but showed that some teachers lacked an understanding of the policy). Many teachers were unclear as to how to set measurable goals. Teachers also indicated a lack of understanding about
appropriate goals for student achievement within their Professional Growth Plans. Beers noted that all groups (teachers, specialists, and administrators) wanted additional help and examples in setting goals. Some of the recommendations Beers provided included facilitating peer groups and learning communities to help establish individual goals and reviewing school, department, and grade level goals prior to setting individual goals. These findings are consistent with the findings of research conducted by Sullivan, Shulman, and Glanz (2002) in seven New York City schools implementing a PGP-like option in the newly designed teacher evaluation system. Both teachers and administrators viewed the PGP option as vague in terms of how to set up professional goals. One teacher that was interviewed commented, “(It is) difficult to determine how to approach goals. (It is) difficult to know what goals are important and what type of professional development (is needed) to address goals...No one is saying how to do this” (p. 467). Saphier (1993) has recommended that for goal setting to be effective training must be provided on how to set realistic and attainable goals.

Goal setting is illustrated in research by Smith (2009). In the New York state school district where Smith conducted her research, teachers were required to state a SMART (specific, measurable, attainable, realistic, timebound) goal for their PGPs, provide a rationale for the goal and state how the goal aligned with district, school, or grade level goals. In addition, teachers decided what measures to use to assess and document progress toward the goal. Teachers were also required to indicate how the goal impacts student learning and how their goal connects to the Framework for Teaching (Danielson, 1996).
Smith’s (2009) study focused on a team of nine second grade teachers in one school using a SMART goal to design their Professional Growth Plans. Based on their students’ writing pretests and because one of the school’s goals was to enhance writing instruction and improve student achievement in writing, the team of teachers decided to make writing the focus of their PGPs. The team of teachers analyzed their students’ writing using a rubric and targeted specific groups of students. Smith observed that setting a specific goal for a small group of students “resulted in significantly positive student learning outcomes and this success made the teachers want to use goal setting more often” (p. 98). By meeting monthly with the grade level team to discuss progress toward the goal and the next steps in the goal implementation the teachers felt their classroom instruction was more focused and purposeful. A comment from one of the teachers was that she felt more attachment to her Professional Growth Plan because of the SMART goal setting and ongoing collaboration throughout the year with her team and the principal.

Nolan and Hoover (2005) suggested that effective goals should be data driven and noted that many teachers have difficulty setting specific, realistic, and measurable goals for their Professional Growth Plans. Tucker and Stronge (2005) stated that a vital part of the goal setting process involves considering student performance measures. However, a Professional Growth Plan involves more than setting a goal for increased student achievement. Danielson (2008) offered the following suggestions for teachers to consider as they design their Professional Growth Plan goals:
The goal is for the teacher’s learning, not student learning (although it should be related to student learning). A teacher may learn how to structure cooperative learning activities, yet will not likely see a result in improved student achievement in the short term.

When applicable, connect the goal with the goals of the school or district.

One goal may involve a significant amount of learning. In some cases where the goal is not as involved, two or three smaller goals may suffice.

The goal should be something that is important to the teacher.

Goals should be stated as outcomes, not activities.

Indicate what would count as evidence of success in meeting the goal.

Research by Jorissen (2007) examined Professional Growth Plans that were part of differentiated teacher evaluation systems in four Midwest school districts. Teachers had been using the PGP for at least three years. Through interviews, focus groups, and surveys teachers revealed their thoughts related to their PGP goals. Following are some of the comments made by the teachers:

- “My principal is very supportive of our goals. She encourages us to work as a team” (p. 19).
- “Principal provided support in defining goal and suggesting ideas for implementation” (p. 19).
- “I do like the idea that you get to choose. I do like the idea that it is multi-year. And I do like that it is something other than “all haul out one of your all star lessons” (p. 20).
For the first time I really felt empowered. Before someone would come in and observe an arbitrary lesson. Now it is write down your goals and your feel empowered. We are in charge of what we’re doing” (p. 20).

These highlights from Jorissen’s research illustrated that some teachers valued the support of their principals in designing and implementing their goals. Also, goal setting provided feelings of empowerment and professionalism.

**Strategies, activities, and anticipated evidence for Professional Growth Plans.**

Principal Daniel Beerens (2000), author of the book *Evaluating Teachers for Professional Growth: Creating a Culture of Motivation and Learning* provided examples of activities taking place in his school’s growth-focused teacher evaluation system based on Charlotte Danielson’s (1996) *Enhancing Professional Practice: A Framework for Teaching*. In designing a PGP an experienced teacher selected either a “Big Picture Option” or “Standards-Based Goal” for one year, and then focused on the other the following year. Some of the Big Picture Options included a PGP focused on one of the following options: differentiated instruction, multiple intelligences, collaborative learning, project-based learning, special education inclusion, literature circles, exploring a teacher’s own grading and assessment practices, and leading a study group. Standards-based goals included working on a goal that was indentified during the Year 3 summative evaluation process, or selecting a new goal related to the *Framework for Teaching* Domain 1 (Planning and Preparing), Domain 2 (The Classroom Environment), or Domain 4 (Professional Responsibilities). Domain 3 (Instruction) was the focus for the summative year evaluation.
Southbridge Public Schools in Massachusetts suggests a long list of possible activities in which teachers may participate as they work toward their growth plan goal(s) such as coursework, research project, piloting a program, training in The Skillful Teacher, developing units that focus on standards-based instruction, peer coaching, lesson study, applying for National Teacher Certification, preparing for professional staff workshops, grant writing, analyzing student data, and grade level meetings focused on a specific initiative (Southbridge Public Schools, 2009). Newport News Public Schools suggests similar activities such as teachers videotaping their own classroom teaching and reflecting on the instructional episode, keeping a journal of actions and reflections related to the goal, designing action research, reading professional literature, and observing in classrooms (Newport News Public Schools, 2001).

Along with planning the strategies and activities that will assist teachers in working toward their Professional Growth Plan goal, it is also important to think about anticipated evidence that will show progress toward the PGP goal. Danielson (2008) provided the following example of a teacher’s Professional Growth Plan goal and anticipated evidence. The teacher’s learning goal is to enhance skills in cooperative learning and the use of group work. In anticipating what would count as evidence of success the teacher lists the following: (a) Students will be able to assume different roles in group work, (b) An observer would notice students working productively together with all student contributing, and (c) Student themselves will report that they find group strategies productive of learning. This example suggests that evidence of meeting a goal does not need to be based on student test scores. However, evidence of student
achievement does play a role in some Professional Growth Plans. The second grade team of teachers mentioned earlier worked to increase their students’ writing scores through targeting specific students with specific strategies and listed increased student achievement as an indicator of success in meeting the goal (Smith, 2009).

**Implementing the plan and collecting evidence.** If learning is to occur, teachers must devote time to carry out the activities in their Professional Growth Plans. As teaching is a time-consuming profession, some schools and districts dedicate time specifically for teachers to work on their PGPs. Some schools have dedicated one of their monthly staff meetings as time to work on PGPs (Danielson, 2008). One school district provided teachers with a professional development day dedicated to working on Professional Growth Plans. Teachers submitted a workday plan explaining how the day would be used to work toward their PGP goals and also turned in a summary reflection the following day (Peine, 2003).

Each school in Montgomery County Public Schools is allocated funds for Staff Development Substitutes. This allows teams of teachers to meet during the regular school day to collaborate (Koppich, 2004; Hemphill, personal communication, March 5, 2010). Based on 604 survey responses and 210 interviews teachers said that time to plan with colleagues was the most important feature of the differentiated teacher evaluation system, followed by the Staff Development Substitutes and working with the school-based Staff Development Teacher (Koppich, 2004). In Newport News Public Schools, Virginia teachers met monthly to discuss their progress on their Professional Growth Plans (Kimball, 2002b). Research by Audet (2005) found that both teachers and administrators
thought there should be more time for teachers to share their PGPs with one another and work together on PGPs activities. A study by Milanowski and Heneman (2001) of ten schools in a district of more than 75 schools in the Midwest implementing a differentiated teacher evaluation system found that time and training were common concerns during the implementation. The new system placed considerable time demands for both teachers and administrators.

In research by Fenwick and Smulders (2001) some of the teachers said they found it hard not to think of the Professional Growth Plan as “one more thing to do” (p. 34). Some teachers put personal time aside to complete the PGP because they said they needed a reflective space. One teacher explained that it was impossible to create meaningful goals amidst the “hot action” of other school responsibilities (p. 34). Several teachers wished for time to revisit their PGPs throughout the school year, or at least midway through the year. Mid-year check-in on the Professional Growth Plan with an administrator is advisable (Danielson, 2008; Kimball, 2002c). Although the PGP process may officially include a mid-year review, in research conducted by Adams (1998) it was evident that not all teachers with PGPs participated in a mid-year review.

Research by Sullivan et al. (2002) shed an interesting light on the implementation of a teacher evaluation system in which tenured teachers in New York City had the choice of a traditional observation or a Professional Growth Plan type option. Teachers and administrators viewed the PGP as an evaluation tool and not as a means of professional growth. Teachers were not willing to invest “time and energy into something whose value as a means of teacher growth as opposed to its use as an evaluation tool has
not been clearly demonstrated” (p. 468). Being observed was less time-consuming so many teachers selected that option over a PGP. During interviews, one teacher commented, “I think it is easier to be observed” (p. 465) and another teacher commented, “People wanted to do the observation and get the process over with. The other is too involved” (p. 468). Attitudes toward the PGP are bound to affect its implementation. From the following teacher’s comment it is obvious that the PGP is not valued, “Why should I invest my time in something that I don’t need” (p. 470). In one of the schools in the study where the principal valued and was committed to the PGP a substantial number of tenured teachers chose the PGP over the traditional observation. In looking at the responses to the 158 surveys that were returned by educators in the seven schools in which this study took place, it was evident the new teacher evaluation system with the PGP-like option was viewed as an evaluative experience rather than an opportunity for growth. This finding connects to the research conducted by Robinson (2009) that highlighted a disconnect between the stated purpose of the evaluation system (both accountability and professional development) and how the principals said they used the system. Only a third of the principals viewed the systems as a vehicle for teacher professional development.

There are several implications from the study by Sullivan et al. (2002) that relate to the implementation of PGPs. First is the importance of training. When the participants in Sullivan’s et al. study were asked how to more effectively implement the differentiated teacher evaluation system the most frequent response to the question was training: “more training, frequent training, training that is continued throughout the year, training for both
teachers and administrators” (p. 468). Jorissen’s (2007) research corroborated the need of training and recommended that districts build a maintenance system into the overall plan for implementation and that regular monitoring take place over time. Another important finding from the study by Sullivan et al. that is applicable to the implementation of PGPs is that both teachers and administrators noted the need for all school personnel to be committed to the PGP for its implementation to be successful. Another important point that arose from this research is that accountability in some form must be mandated.

Principals filed the teacher evaluations in personnel files and that was the end of it. The department in charge of implementing the differentiated teacher evaluation system never required the principals to report any aspect of the implementation. The influential roles administrators and central office staff play in implementing Professional Growth Plans is illustrated in research conducted by Colby (2001) of twenty-one school districts in North Carolina, with an in-depth focus on three districts.

Colby’s (2001) research on three districts implementing Professional Growth Plans within their differentiated teacher evaluation systems found that successful implementation may be more a matter of local processes than the specific instrument that is used. Colby noted that although the three districts were quite different from each other, they had several important characteristics in common which included, “(a) The vision that teacher evaluation could impact school improvement, professional development, and student learning; (b) the articulation of the vision in policies and practice for teacher evaluation that created and supported strong connections; and (c) the ability of district administrators to design and implement a process for making connections in practice
through training, monitoring, and continuous improvement” (p. 182). This research links to the influence school culture has on the implementation of Professional Growth Plans.

In research by Milanowski and Heneman (2001) it was evident that the teachers’ perceptions ranged from viewing the teacher evaluation system as a mechanism for improving teaching as a means toward improving student learning to a view that the system was a mechanism to eliminate poor teachers. As noted by Robinson (2009) only one-third of principals viewed the differentiated system as a vehicle for teacher professional development. Audet’s (2005) research found that school culture, along with school leadership, were important influences on teachers’ development of Professional Growth Plans. As a result of research conducted in five school districts in Alberta, Fenwick (2004) found that implementation varied by the amount of commitment that the individual school principals exhibited toward the PGP process. “Considerable school-level discretion appeared to influence the extent of emphasis on growth plan implementation” (p. 271). In three schools that seemed to be successfully implementing PGPs, a commonality between the three schools was an existing growth-orientated culture (Fenwick & Smulders, 2001). The principals mentioned resources such as time and finances were dedicated in their schools to support professional development. The principals also mentioned that staff often collaborated and were supportive of each other. These school cultures had already developed norms of collaboration and valued professional learning before the Professional Growth Plans were mandated. “The only real change brought by TPGPs [Teacher Professional Growth Plans] to these schools was often to formalize and recognize a system already in place of teachers identifying areas
for growth and pursuing development activities on an ongoing basis” (p. 12). It seems likely that a school’s culture influences the implementation of Professional Growth Plans. Reciprocally, Professional Growth Plans can influence school culture. Peinie (2003) found that through the process of developing PGPs, carrying out the PGP activities, collaborating on an ongoing basis, and sharing PGP results with the school learning community the school’s culture gradually transformed.

Another potential influence on teachers’ implementation of the Professional Growth Plan is the connection the PGPs have with the other activities taking place in the school. Colby, Bradshaw and Joyner (2002) suggested that “teacher evaluation practices can serve as a catalyst for creating connections in practice between school improvement, professional development and student learning” (p.7). Implementation may be most effective if a teacher’s PGP has coherence with the school’s focus.

As part of the PGP implementation process teachers are expected to document their activities and reflect on their learning experiences (Newport News Public Schools, 2001). In research conducted by Kimball (2002b) teachers were asked to respond to the following statement, “The evidence I collected during the year helped me reflect on my professional growth” (p. 42). Over half the teachers (301 teachers or 52%) responded strongly agree and 213 (37%) responded agreed. Peine (2008) described the documents a teacher collected for a Professional Growth Plan devoted to the teacher’s goal of learning about and using interactive strategies to deliver instruction. Sources of documentation included summaries of readings, reflections on readings, observations, and activities, lesson plans, video of class lessons, work day reflections, and student surveys. Evidence
collected that assisted the teacher in evaluating the plan included a revised Civil War unit with interactive strategies incorporated, student work samples, student participation rates data showing an increase from beginning to end, student pre and post surveys demonstrating an increased interest in the class, and teacher reflection.

**Reflecting on learning.** Although reflection is listed here as the last step in the Professional Growth Plan process, reflective practice occurs throughout the process. During the self-assessment to assist with goal setting teachers reflect on their performance and identify areas for growth (Kimball, 2002c). Koppich (2004) found that one of the factors teachers consider most important in developing their PGPs is self-reflection on teaching practices. Ideally, reflection takes place throughout the year as teachers reflect on the learning that has resulted from their PGP activities. A step that encourages reflection is consulting the PGP from time to time throughout the year, as is illustrated in the comment of this teacher, “I pull out that growth plan and I look and it helps me to say ok, I’ve kind of not been focusing on this area for awhile. I need to go back in my planning and maybe do some more of these activities or go back to check that I’m on the right path” (Fenwick & Smulders, 2001, p. 33).

Another method of encouraging reflection is for teachers to meet in groups to talk about their Professional Growth Plan progress. Research by Fenwick (2001) showed that principals actively encouraged their staff members to work in groups on PGPs which helped sustain reflective talk throughout the year. Audet (2005) found that both teachers and administrators stated there should be more time for teachers to share their PGPs with one another. Peine (2003) reported that time was provided at staff meetings for teachers
to share two minute progress reports on their PGPs throughout the year. To avoid a brag session, teachers were encouraged to share a problem confronting them in their growth plan efforts. When teachers completed their PGPs they were encouraged to share the completed plans to other grade levels, departments, at professional conferences, or in professional publications. These interactions served to provide opportunities for further reflection on the PGP.

Another method for increasing opportunities for reflection is to implement mid-year conferences on the PGP (Danielson, 2008). Although mid-year conferences generally take place between a principal and the teacher, this is not always the case. In a school in Alberta teachers were welcome to invite whichever peers they wished to a mid-year review. Teachers reported that the collaborative groups were at least as valuable as the administrator-teacher conferences (Fenwick & Smulders, 2001). In Newport News Public Schools, teachers are assigned by the principal to a PGP support team. In addition to a mid-year sharing, the teams met monthly to support each other on the various Professional Growth Plans (Newport News Public Schools, 2001). Kimball (2002b), citing results from a Newport News Public Schools 2000 report, pointed out that in written responses on the surveys “some teachers found the support teams beneficial, while others cited problems with scheduling and supporting colleagues with different professional growth goals. Teachers also wanted less paperwork and time spent in meetings” (p. 32). Although meetings may encourage reflection, reflection is not always evident in the written Professional Growth Plans, as is shown in the research described below.
In a school district in Texas using a differentiated teacher evaluation system, Adams (1998) conducted a content analysis of 187 Professional Growth Plans to identify evidence of reflective practice, innovation, collaboration, and teacher research. Adams defined reflective practice as involving teachers thinking about instruction in ways that allow them to test and develop their own theories and practices. Adams categorized a PGP as reflective if it demonstrated any of the following indicators:

Did the written plan show evidence of:

- analysis and/or problem identification?
- an attempt at problem solving?
- a goal for improving or developing a needed professional skill?
- an objective that went beyond the standard curriculum?
- an attempt to better meet specific student needs?

(p. 49)

Adams (1998) found that 70% of the PGPs examined showed evidence of teacher reflection. It is interesting to note that 30% of the PGPs showed no evidence of reflection according to the coding scheme used by Adams. This could be due to the fact that teachers needed more guidance in how to be reflective, as noted in the research below.

In the British Columbia school district where Audet (2005) conducted his research, he found that the district’s guide to Professional Growth Plans contained no suggestions to help guide teachers through an analysis of their results and there were no strategies to guide teachers in the process of reflection. Montgomery County Public Schools offers a Studying Skillful Teaching course, as part of their teacher evaluation
system, to assist teachers with becoming more reflective about their teaching (Koppich, 2004). Another way to assist teachers with being reflective is by examining artifacts collected during the PGP process as discussed below.

In the Washoe County School District in Nevada (Washoe County School District, 2007) teachers are required to attach artifacts and evidence data they have collected to their Professional Growth Plans. By examining artifacts such as student work samples and viewing videotapes educators are encouraged to think critically about the learning the artifact does or does not represent. This activity enhances reflective practice and is a step toward changing teachers’ practices (Peine, 2008). In order to scaffold teachers’ expertise with reflection and reflective practice, prompts and questions may be helpful. In Washoe County School District teachers attach a one-page self reflection and are asked to address the following questions:

- How successful were you in achieving your goal(s)? Did you accomplish the planned results or outcomes? How did this growth change your instruction or student achievement? Would you make any changes next year? If so, what would they be and why? (Washoe County School District, 2007, p. 50)

Saphier (1993) pointed out that when teachers write about what they are doing, self-evaluations stimulate and advance teacher’s thinking about what they do. Saphier quotes Henry Glassie as saying “I write what I know to find out what I think” (p. 49).
Learning can occur through reflection, even when a Professional Growth Plan goal is not accomplished. The Newport News Teacher Performance Assessment System Handbook states,

Even when a plan was not completed or an activity was not successful, learning can occur if you choose to reflect and be realistic in your reflection. Ultimately, the purpose of a professional growth plan is learning, not completing the plan. As you prepare for your final support team meeting, determine

- What professional growth activities will you share.
- Why you chose these particular activities during the year.
- What benefit you gained from these activities.
- What was not worth the effort and why.
- What you would do differently if you had it to do over again.
- How your support team helped you grow.
- What additional things your support team could have done for you.
- What your students gained as a result of your efforts.

(Newport News Public Schools, 2001, p. 5:18)

By providing teachers with prompts to aid reflection and by providing time for teachers to examine artifacts and evidence individually and with colleagues, teachers are more likely to improve their practice through the Professional Growth Plan process, and ultimately the learning of their students. The next section of this paper looks specifically
at the Professional Growth Plan being implemented in the Owen Public Schools called
the Professional Development Plan.

The Professional Development Plan in the Owen Public Schools

In the Owen Public Schools the Professional Development Plan (PDP) is designed
for career teachers who demonstrated teaching competence during the summative year of
the evaluation cycle. The purpose of the PDP process is to improve student learning by
providing teachers with opportunities for individualized professional growth within the
structure of the teacher evaluation system.

The Professional Development Plan (PDP) infuses many of the characteristics
highlighted in the beginning of this chapter that described effective professional
development, including Duration, Focus on Content and Pedagogy, Learning in the
Workplace, Active Learning, and Educators Learning Together. The next section begins
with an overview of the teacher evaluation system in the Owen Public Schools, followed
by a brief history of the Professional Development Plan and then proceeds to illustrate
how the PDP provides opportunities for teacher professional growth.

The Professional Development Plan (PDP) is one component of the Owen Public
Schools’ teacher evaluation system, which is based on Owen’s Best Instructional
Practices, a modified version of Danielson’s (1996) Framework for Teaching. The
evaluation system has four main components: The Performance Evaluation Plan (for
probationary teachers), the Professional Development Plan (PDP), the Analysis of
Professional Practice (for tenured teachers every four years), and the Formal
Improvement Plan. The PDP is designed for non-probationary, successful (not on a

Formal Improvement Plan), tenured, continuing contract teachers. The term “career teacher” or “T-Scale” will be used to encompass the terms mentioned in the previous sentence. The PDP is based on the assumption that professional learning is continuous and it is a part of every teacher’s responsibility to engage in professional development (Owen Public Schools, 2008; Danielson, 2008). The Professional Development Plan is based on a collegial process engaging teachers and administrators. The school district superintendent writes:

The Professional Development Plan (PDP) provides unique opportunities for non-probationary T-scale employees to direct their own professional development. Specifically, a T-Scale employee may identify and hone individual skills listed in Owen’s Best Instructional Practices in a particular area such as planning, instruction, classroom environment or professional responsibilities. In fact, the Plan affords a safety net for T-Scale employees to take educational risks and stimulate professional growth. T-Scale employees can discover which techniques and strategies are most effective in improving students learning. Included in this handbook are ideas for PDPs and a section on Most Frequently Asked Questions. To assist T-Scale employees in creating a PDP, a list of local resources and references is included. (Teacher Evaluation Handbook, 2008, p.1)

In 1994 the Owen Education Association (OEA) formed the OEA Teacher Evaluation Committee in response to teacher requests for an evaluation policy that would
support professional growth and collegial exchange (Owen District T-Scale Evaluation System History, 2010). The goal of this group was to draft a differentiated teacher evaluation system for the differing needs of probationary and experienced teachers. Aligning with the work started with OEA, the Owen superintendent created a Task Force on Teacher Evaluation in 1996 with the aim of revising the system so there would be a greater focus on professional development. The task force decided to start their work by focusing on the evaluation system for continuing contract teachers. (Owen District T-Scale Evaluation System History, 2010). Using the work of the OEA committee and the Framework for Teaching (Danielson, 1996) the task force designed a model that put teachers in charge of their own professional learning. The Owen School Board supported a pilot of the model to take place during the 1997-1998 school year, with training taking place for volunteer administrators and teachers over the summer. Another pilot was conducted during the 1998-1999 school year with approximately 250 teachers participating in the optional PDP program, with twelve hours of training provided for teachers and administrators. The Owen Public Schools began full implementation of the Professional Development Plan (PDP) during the 1999-2000 school year.

As mentioned earlier, The PDP was designed based on the Framework for Teaching compiled by Charlotte Danielson (Danielson, 1996). The Framework for Teaching “identifies those aspects of a teacher’s responsibilities that have been documented through empirical studies and theoretical research as promoting improved student learning” (Danielson, 1996, p.1). The responsibilities include four domains: (a) Planning and Preparation, (b) The Classroom Environment, (c) Instruction, and (d)
Professional Responsibilities (see Appendix A). The Owen Public Schools’ modified version of the *Framework for Teaching* is titled *Best Instructional Practices* (see Appendix B).

*The Owen District Teacher Evaluation Handbook*, which was published in 1999 and revised in 2008, states that the district’s mission is to implement an “evaluation process that encourages and supports the professional growth of all T-Scale employees and assures that every T-Scale employee supports improved student learning” (p. 2). The handbook states the following beliefs and goals for the teacher evaluation system:

- **Beliefs**
  - Improved student learning is the priority of Owen Public Schools.
  - Owen Public Schools must have excellent T-Scale employees.
  - All T-Scale employees are professionals.
  - T-Scale employees have the responsibility to engage in professional growth.
  - T-Scale employees must be supported in their professional growth.
  - The evaluation process must assure professional growth.
  - Constructive dialogue among professional staff in an atmosphere of mutual trust and respect is paramount to the success of the professional teacher evaluation system.
  - The evaluation process must assure that Owen Public Schools retains successful T-Scale employees.

- **Goals**

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Engage all T-Scale employees and evaluators in implementing the Professional Teacher Evaluation System.

Provide continuous training in *Best Instructional Practices* for T-Scale employees and evaluators.

Provide evaluators training in the observation process and evaluation writing as needed.

Provide a collegial environment for professional dialogue about T-Scale employee findings related to observations of and improvement of student learning.

Assess the implementation of the Professional Teacher Evaluation System and revise as needed.

The following information comes from the Owen District Policy Implementation Procedures for T-Scale Evaluation (2005):

1. Participating teachers include all continuing contract teachers and teams of teachers who are successful.

2. The purpose of the PDP process is to improve student learning by providing teachers with opportunities for individualized professional growth.

3. The PDP is designed with the understanding that teachers have different professional needs and that they change and improve in various ways. The PDP provides opportunities for significant growth. Growth requires time, reflection, and risk taking, and produces change in a person. It should be understood that the basis for the PDP is a relationship between teacher and
administrator. Because professional development is not a summative process, the PDP will not be used as a basis for determining that an employee’s performance is unsatisfactory or as probably cause for non-renewal of a teacher’s contract. If a teacher on a PDP is not performing satisfactorily in the area(s) of planning, instruction, classroom environment and/or professional responsibilities, the administrator will bring the matter to the attention of the teacher and may ultimately require the teacher to move to the Formal Improvement Plan.

4. The following guidelines pertain to the PDP:
   a. It is a single or multi-year plan
   b. It requires that the teacher’s performance continue to be successful
   c. It is designed by the teacher in collaboration with his/her administrator
   d. It is implemented individually or within a team
   e. It fosters innovation that leads to increased personal understanding and awareness
   f. It addresses one or more of the following components of professional practice: planning, instruction, classroom environment and professional responsibility.
   g. It involves the development of goals from one or more of the following categories:
      i. Teacher Goals – directly related to delivery of instruction
      ii. Student Goals – related to desired learner outcomes
iii. Program Goals – related to the District Strategic Plan, the School Management Plan, curriculum development and committee involvement

iv. Professional Responsibilities Goals – related to improving self, school, and district.

h. It provides the following five options for designing the plan:
i. Collaborative action inquiry

ii. Classroom-based inquiry/teacher research

iii. Implementing a proven practice new to the teacher

iv. Guided observations- the teacher indicates the area of instruction related to the goal of his/her plan that he/she wants the administrator to observe.

v. Pursuing National Board for Professional Teaching Standards certification.

i. It will be reviewed collaboratively on an annual basis by the teacher(s) and evaluator(s) to assess progress.

j. It will include a conference held between the teacher and administrator at the completion of the PDP.

k. It may include assessments such as, but not limited to, products and documentation. Examples are portfolios, personal journals, test results, assessment, curricular units, and contributions to professional journals and other publications.
l. It may include one or more observations followed by discussion or written comments.

m. It may, at the teacher’s option, be shared with others.

5. Procedures

a. The teacher and administrator shall agree on the components and goals of the teacher’s PDP by October 15. If agreement cannot be reached, the teacher and administrator should continue to discuss the PDP and work toward agreement. If agreement still cannot be reached, the administrator has the authority to establish the plan. The teacher shall complete Form A (see Appendix C).

b. The teacher shall write an annual non-evaluative, reflective description of the process undertaken during the PDP on Form B (see Appendix D), which shall be signed by the teacher and the administrator and placed in the teacher’s personnel file.

c. If a teacher transfers between schools mid-year or is unsuitable to continue his or her teaching, the teacher must submit a one-page non-evaluative, reflective description to the administrator.

d. Ongoing staff development opportunities shall be provided for the teachers and administrators on the PDP process.

e. Forums for collegial sharing shall be available annually.

6. Observations
a. At the administrator’s discretion or the teacher’s request, observations of the teacher’s performance in the classroom may be conducted.

The policy included above is reiterated in the following description by the researcher of a teacher going through the PDP process from the beginning to the end of the school year. The PDP process begins with a teacher or group of teachers developing a learning goal in collaboration with his/her administrator. Goals are selected from one of the following categories:

- Teacher Goals – directly related to delivery of instruction
- Student Goals – related to desired learner outcomes
- Program Goals – related to the District Strategic Plan, the School Management Plan, curriculum development and committee involvement
- Professional Responsibilities Goals – related to improving self, school, and district.

After a goal is selected, the teacher incorporates the goal into a question to guide his/her learning for the year. To illustrate the topics of professional development being pursued by teachers participating in the PDP, the researcher has included the following examples from the 2008-2009 school year. This first example from an elementary school math coach is:

How can facilitating a collaborative inquiry group to explore the question:

“How can I differentiate Investigations Mathematics curriculum to meet the needs of all learners, including those identified as students with special
needs, those identified as English Language Learners, and those identified as highly-able students” improve my math coaching skills?

A group of classroom teachers posed the following PDP question:

How can we use the Smart Board to increase students’ visual literacy skills and strengthen their understanding of the curriculum?

An English Language Learner (ELL) teacher investigated the following PDP question:

How does my participation in TESA training help improve my communication and facilitation skills and to what extent will these skills impact student achievement?

A special education teacher’s PDP question was:

How does explicit instruction in decoding improve student reading skills in decoding, comprehension, and fluency?

At the beginning of the school year career teachers complete the Professional Development Plan form. The form requires teachers to list their PDP Question, Proposed Strategies/Activities and Anticipated Evidence. Both the teacher and the evaluator, who is generally the principal, sign the form. Over the course of the school year an individual teacher, or group of teachers, engages in activities related to their PDP focus. Opportunities for active learning include analyzing student work, planning lessons incorporating new strategies, reflecting on a lesson that was taught, writing, and discussing an educational book. Throughout the year teachers collect evidence in support of the PDP focus. Evidence may include portfolios, personal journals, test results,
assessment, curricular units, and contributions to professional journals and other publications. At the end of the year teachers reflect on the evidence, write a summary, and dialogue with the administrator about the professional growth experience. In addition to collegial conversations and sharing evidence with the administrator, teachers have the option to share their PDPs at the district Professional Learning Fair held every May.

This chapter began with a review of the literature on what is known about effective professional development for teacher learning. Next, several studies were reviewed that linked professional development and teacher attitudes. Subsequently, school culture, the theoretical framework for the proposed study was discussed. After defining school culture and discussing various models and types of school culture, a collaborative school culture was proposed as one that is optimal for teacher learning. The collaborative School Culture Survey was introduced and several studies were reviewed that have employed this instrument. Next differentiated teacher evaluation systems designed for the dual purposes of accountability and professional development were discussed. By synthesizing the research related to Professional Growth Plans, the purpose of PGPs and the steps in the PGP process were explored. The chapter concluded with a detailed explanation of the professional development model that was investigated in this research project, the Owen Public Schools’ Professional Development Plan.
3. Methods

The purpose of this study was to investigate the influence of school culture, school goals, and teacher collaboration on teachers’ attitudes toward their Professional Development Plans. The Professional Development Plan (PDP) is a specific professional development model situated within the teacher evaluation system being implemented in the Owen Public Schools. The PDP incorporates many characteristics that research has shown contribute to successful teacher learning including: extending professional development over a significant amount of time, connecting it to teacher practice, encouraging reflection, and being situated in the workplace. Teachers may also choose to align their PDP with their schools’ goals and conduct their PDP collaboratively. In addition, this research project involved collecting data on the various steps of the PDP process.

This chapter begins with a review of the research questions and then proceeds to a description of the research design, setting, and participants for this study. The procedures for data collection are shared, along with the data collection instruments and how issues of validity and reliability were addressed. Next, the descriptive and inferential data analysis methods are presented. The chapter concludes with a discussion of the limitations of this research project.

This study is focused on the following questions:
1. To what extent do the five factors of school culture correlate with teachers' attitudes toward the Professional Development Plan (PDP)?
2. Do the factors of school culture predict teachers’ attitudes toward the PDP?
3. To what extent do the steps of the PDP process correlate with teachers’ attitudes toward the PDP?
4. Do the steps of the PDP process predict teachers’ attitudes toward the PDP?
5. To what extent do PDPs conducted individually and PDPs conducted collaboratively differ on teachers’ attitudes towards the PDP?
6. To what extent do PDPs aligned with school goals and PDPs not aligned with school goals differ on teachers’ attitudes towards the PDP?
7. Do teachers’ attitudes toward the PDP differ for their years of teaching, educator role (classroom, specialist), gender, level of education (B.A., Masters, or Ph.D) and teaching level (Pre-K/Elementary, Secondary)?

**Design**

This study employed a cross-sectional survey design, which means that the data were collected at one point in time in order to examine current attitudes, beliefs, opinions, or practices across a variety of teachers (Creswell, 2005). According to Hox, de Leeuw, and Dillman (2008), a survey can be defined as a research strategy in which quantitative data are systematically collected from a relatively large sample taken from the population. In the present study, the researcher collected data at one point in time to investigate the relationships between the factors of school culture and teachers’ attitudes toward the PDP. In addition, the researcher examined the relationships between the steps
of the PDP process and teachers’ attitudes toward PDPs. The data were also analyzed to measure the influence of teacher collaboration, school goals, and teacher demographic variables on the teachers’ attitudes toward the PDP. Prior to conducting the research, the researcher obtained permission from the George Mason University Human Subjects Review Board and from the Owen Public Schools (Appendix E).

Setting and Participants

The school district in this study is located in the inner ring of suburbs of a major east coast city and educates one of the nation’s most diverse student populations. The students in the Owen Public Schools come from 127 countries and speak 105 different languages. There are 18,517 prekindergarten through 12th grade students and 2,137 teachers in the district. There are 22 elementary schools, 5 middle schools, 3 high schools, 1 secondary (6th – 12th) school, and 6 alternative secondary schools. For the 2008 – 2009 school year, school district personnel estimated that 1,168 teachers would participate in one component of the district evaluation system, the Professional Development Plan (PDP). Although the researcher attempted to include all school-based teachers participating in the PDP process for the 2008-2009 school year in this study, due to restrictions placed by the district this did not occur. This is explained in more detail in the next section of this chapter. The sample for this research study included 154 prekindergarten through high school teachers who responded to an online survey questionnaire. The respondents were classroom-based teachers as well as non-classroom based teacher specialists such as librarians, counselors, art, and music teachers. Teachers conducting PDPs who were not assigned to a school, such as central office, were not
invited to participate due to the fact that the theoretical framework for the study was school culture.

**Data Collection Procedures**

As the PDP is one component of the Owen Public Schools’ Teacher Evaluation System, the district considers data relating to the PDP to be of a sensitive nature. Therefore, the researcher was not given permission to obtain a list of names of all teachers participating in the PDP process. The researcher was, however, given consent to contact each principal about the study with the stipulation that the principal only be contacted once. The researcher discussed with a current Owen principal the best method for contacting principals to ask them to distribute the questionnaire link to teachers. Email was recommended over a paper letter due to the fact the principal could easily reply to the researcher if there were any questions and could easily forward the email with the link to the online questionnaire to his/her staff.

In the Application to Conduct Research in Owen Public Schools, the researcher proposed that teachers receive a postcard with information about the survey, including the purpose of the study and the dates the online questionnaire would be open for completion. While Dillman (2000) recommends a postcard be sent preceding the data collection window to increase the response rate, the school district did not permit the researcher to distribute postcards to teachers. The researcher was given permission to include an announcement about the research project in the Owen Public Schools newsletter (Appendix F). The announcement directed teachers to contact the researcher via email to request the link to the online questionnaire.
The researcher then contacted each principal in the district via email to explain the nature of the research and to ask that the principal forward the link to the online questionnaire along with information about the study to the teachers in his/her school building (Appendix G). The researcher timed the email to the principals so that it was sent on the same day the online questionnaire went live on the internet. The two events coincided to encourage the principal to forward the email immediately to his/her staff and to reduce the possibility of the message being lost in the email Inbox. All teachers in the district have access to computers with internet connections, and therefore were able to complete the survey questionnaire from work or from home. The survey was hosted on the internet by SurveyMonkey. Teachers agreed to an online consent form before starting the survey questions.

June was selected as the best time to collect data for several reasons. First, state-mandated student testing takes place in May and many principals may not want any extra demands placed on their teachers during this time (personal communication, Owen Public Schools Principal, October 2008). June is also the time teachers are completing their required PDP paperwork. A survey at this time would coincide with the timeframe within which teachers are reflecting on their PDP for the school year. The survey was available from June 1 through June 22, 2009.

A technique to increase survey response rates is to offer an incentive to the participants (Manfreda & Vehovar, 2008). Participants were offered the chance to win one of three $50.00 Target gift cards. At the end of the online survey teachers were directed to print the page, write their name and school, and then send the form via school
mail to the researcher, who is a teacher at one of the schools in the district. There was no way of associating the printed forms with the online survey answers. The researcher maintained a list of the names of the teachers who entered the drawing, so that she could assure that no one entered twice (printed off the final questionnaire page two times).

While the researcher observed, the principal at the school where the researcher works drew the winning papers from a box with all the entries. There was also a drawing for one $50.00 Target gift card for principals to encourage them to forward the link to the online survey to teachers. The principal at the school where the researcher teaches drew out the winning principal’s name and did not include her own name in the drawing.

Data Collection Instruments

The major concepts measured in this study were teacher perception of school culture, teachers’ attitudes toward the PDP, the steps of the PDP process, level of PDP alignment with school goals, and level of PDP collaboration. These concepts were measured through the use of three instruments: (a) the School Culture Survey, (b) the Teachers’ Attitudes toward the Professional Development Plan Scale, and (c) the PDP Process, School Goals, Collaboration, and Student Learning Survey. These instruments may be viewed in Appendices H - K. The next section of the chapter describes each of these instruments.

School Culture Survey

The School Culture Survey (SCS) was developed by Steve Gruenert and his doctoral advisor Jerry Valentine at the University of Missouri, Columbia in 1988 (see Appendix H). Since that time the SCS has been used in many research studies (Curtis, 100
The survey was developed based on the literature related to school culture, effective school cultures, and collaborative school cultures. The Gruenert pilot survey included 79 items based on descriptors pulled from the literature review.

After a pilot test with 632 K – 12 teachers in 27 schools in Missouri the survey was reduced to 35 items using a factor analysis with Varimax rotation, an item reduction method. “Criteria for retention of an item within a factor were: (a) at least .50 as a factor loading, and (b) a cross-loading difference of .15 or higher. Factors were retained if they had at least three items that met these criteria” (Gruenert, 2005, p.45). The final version of the SCS contains six factors within 35 questions. The choices for the 35 questions are 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree. The six factors are: (a) Collaborative Leadership, (b) Teacher Collaboration, (c) Professional Development, (d) Collegial Support, (e) Unity of Purpose, and (f) Learning Partnership. A description of the factors is presented next. Also included with the description is the reliability coefficient (Cronbach’s alpha) for each of the factors from data collected by Gruenert (1998).

- Collaborative Leadership (Cronbach’s alpha of .91): Measures the degree to which school leaders establish and maintain collaborative relationships with school staff. Leaders value teachers' ideas, seek input, engage staff in decision-making, and trust the professional judgment of the staff. Leaders support and reward risk-taking and innovative ideas designed to improve
education for the students. Leaders reinforce the sharing of ideas and effective practices among all staff.

- **Teacher Collaboration (Cronbach’s alpha of .83):** Measures the degree to which teachers engage in constructive dialogue that furthers the educational vision of the school. Teachers across the school plan together, observe and discuss teaching practices, evaluate programs, and develop an awareness of the practices and programs of other teachers.

- **Professional Development (Cronbach's alpha of .87):** Measures the degree to which teachers value continuous personal development and school-wide improvement. Teachers seek ideas from seminars, colleagues, organizations, and other professional sources to maintain current knowledge, particularly current knowledge about instructional practices.

- **Collegial Support (Cronbach's alpha of .80):** Measures the degree to which teachers work together effectively. Teachers trust each other, value each other's ideas, and assist each other as they work to accomplish the tasks of the school organization.

- **Unity of Purpose (Cronbach's alpha of .82):** Measures the degree to which teachers work toward a common mission for the school. Teachers understand, support, and perform in accordance with that mission.

- **Learning Partnership (Cronbach's alpha of .66):** Measures the degree to which teachers, parents, and students work together for the common good of the student. Parents and teachers share common expectations and communicate
frequently about student performance. Parents trust teachers and students generally accept responsibility for their schooling.

To study the validity of the Gruenert instrument, a correlational analysis was conducted between the factors of the School Culture Survey and the School Climate Survey. The School Climate Survey was developed by the National Association of Secondary School Principals as one tool to assist schools with planning, school accreditation reports and school improvement initiatives. The School Climate Survey contains ten subscales (factors). Gruenert excluded six climate factors because they were not considered to be sufficient in their capacity to reflect elements of culture. The remaining four factors were chosen to be correlated with the School Culture Survey due to their logical association with each other (Gruenert, 1998). Gruenert based this decision on the premise that climate surveys may be viewed as artifacts of culture. The four factors from the School Climate Survey that were used are:

1. Teacher-Student Relationships, this factor would seem to be associated with the culture factors Collegial Support and Teacher Collaboration
2. Administration, this factor would seem to be associated with the culture factors Collaborative Leadership and Collegial Support
3. Student Academic Orientation, this factor would seem to be associated with the culture factor Unity of Purpose
4. Instructional Management, this factor would seem to be associated with the culture factors Collaborative Leadership and Learning Partnership.
Each of the six factors in the School Culture Survey significantly correlated with a minimum of two of the four school climate factors. Overall, 15 of the 24 correlations were significant at the .05 level and another seven were significant at the .01 level (Gruenert, 1998). These correlations support the validity of the School Culture Survey as an instrument to measure a collaborative school culture. Five of the 6 factors of the School Culture Survey were employed in this research study: (a) Collaborative Leadership, (b) Teacher Collaboration, (c) Professional Development, (d) Unity of Purpose, (e) Collegial Support. The final factor, Learning Partnership, did not fit with the theoretical aims of this research project and hence the data collected for this factor were not analyzed. In Chapter 4 the words “factor” and “subscale” are used interchangeably when describing the data analysis findings.

**Teachers’ Attitudes toward Professional Development Plan Scale**

The Teachers’ Attitudes toward Professional Development Plan (TAPDP) Scale was developed to measure teachers’ attitudes toward the PDP and was utilized as the dependent variable in this research project (see Appendix J). The TAPDP scale is modified from the Teachers’ Attitudes about Professional Development (TAP) scale developed by Torff et al. (2005). The next section of this chapter explains the development of the TAP by Torff et al. and then continues with a description of the development of the TAPDP. Following these descriptions of the instrument development, an explanation of the factor analysis that was conducted to determine that the new TAPDP measured a construct distinguishable from TAP is presented. Lastly, an
The development of the Teachers’ Attitudes about Professional Development (TAP) began with the researchers drafting 44 statements that reflected attitudes about teachers’ professional development. The statements included a range of professional development formats such as workshops, conferences, books and outcomes such as growth as a teacher and improvement of classroom instruction (Torff et al., 2005). Each statement was followed by a six-point scale (1 = strongly agree, 2 = moderately agree, 3 = agree slightly more than disagree, 4 = disagree slightly more than agree, 5 = moderately disagree, 6 = strongly disagree).

In the preliminary pilot testing, the 44 draft items were presented to twenty university professors in the School of Education and Allied Human Services at Hofstra University. The professors rated each item as indicating an attitude favorable or unfavorable about professional development. As expected, given the deliberately polarized nature of the items, 100% of the judgments made by the professors were correctly classified (Torff et al., 2005).

The next step in developing the TAP scale consisted of asking administrators in nine public schools in Long Island, New York to nominate one or more teachers they considered to be inclined to pursue ongoing professional development, and one or more teachers they considered to be adverse to professional development. In total, 66 teachers were nominated and participated in taking the 44 item instrument. Forty of the teachers...
were classified as “PD inclined” and 26 were classified as “PD adverse” by the administrators.

The 44 items were screened for relevance using a logistic regression model to predict the asserted professional development classification (Torff et al., 2005). Two variables, gender and teaching experience, were added to the model as covariates. The logistic regression produced a set of nine items: four reverse scored items and five non-reverse scored items that could be interpreted as inline with the theoretical aims of the scale to assess teachers’ attitudes about professional development. With the use of a .5 cutoff value, the model provided a 69.2% correct prediction of the teachers’ professional development classification. According to the authors, a 69.2% predictive performance is considered satisfactory, although not outstanding. Torff et al. (2005) reason that, “the PD classification was used as an aide to item selection and is, in and of itself, the output of subjective expert opinion” (p.824). An acceptable degree of interrelatedness for the nine selected items was determined through tests of internal consistency. The overall alpha level for the nine-item scale was .91 (Torff et al., 2005).

The next step in the development of the TAP scale was an exploratory factor analysis to identify factors underlying teachers’ attitudes about PD. One hundred seventy-six teachers were selected at random from lists of faculty at 11 schools in New York. Principal axis factoring and principal components methods were used to evaluate the numbers of factors and factorability of the correlation matrices. Both methods yielded similar results (Torff et al., 2005). The factors were determined by the eigenvalues greater than 1, and examination of the scree plot. Upon examining the scree plot, a single-
factor model was strongly suggested. This single factor, which accounted for 53% of the variance, was deemed to be in alignment with the theoretical aims of the scale to assess teachers’ attitudes about professional development.

The authors believed that within the nine items there may be a subset that would explain a higher portion of the within-group variance. They evaluated several subsets using item elimination based on pattern/structure coefficients (using a cutoff of .65) and evaluation of explained variance contribution. This process produced a 6% increase in explained variance and resulted in the five item scale with a satisfactory level of internal consistency (alpha = .87). Three items on the scale described favorable attitudes about professional development and two described unfavorable attitudes. The wording of the two unfavorable attitudes about professional development statements allows for reverse scoring to diminish response bias. Each statement is followed by a six-point scale (1 = strongly agree, 2 = moderately agree, 3 = agree slightly more than disagree, 4 = disagree slightly more than agree, 5 = moderately disagree, 6 = strongly disagree). The final five items in the scale are: (a) Professional development workshops often help teachers to develop new teaching techniques, (b) If I did not have to attend in-service workshops, I would not, (c) Professional development events are worth the time they take, (d) I have been enriched by the teacher training events I have attended, and (e) Staff development initiatives have not had much impact on my teaching.

In order to determine if the five-item TAP scale captured the construct, “Teachers’ Attitudes about Professional Development” and not similar constructs, it was tested against four other instruments: (a) the Marlowe-Crowne Social Desirability Scale
(MCSDS; Crowne & Marlowe, 1964); (b) the Need for Cognition Scale (NCS; Cacioppo & Petty, 1982); (c) the Authoritarianism-Rebellion Scale (AR; Kohn, 1972); and (d) the short form of the Teachers’ Sense of Efficacy Scale (TSES; Tschannen-Moran & Woolfolk Hoy, 2001). These instruments were administered to 59 randomly selected teachers from faculty lists at nine schools on Long Island, New York. Moderate to high alpha coefficients provided evidence for the internal consistency of scores on the TAP scale. Low correlations were found between the TAP scale and the aforementioned scales (Torff et al., 2005), showing the TAP scale is indeed measuring a unique construct.

The Teachers’ Attitudes about Professional Development (TAP) Scale has been used in research studies focusing on how teacher characteristics such as age, gender, years of teaching, and level of education correlate with teachers’ attitudes about professional development (Torff & Sessions, 2008). In the present research study, the researcher created a modified version of the TAP Scale called the Teachers’ Attitudes toward the Professional Development Plan (TAPDP) Scale. The scale is scored on a 6-point scale (1 = strongly agree, 2 = moderately agree, 3 = agree slightly more than disagree, 4 = disagree slightly more than agree, 5 = moderately disagree, and 6 = strongly disagree). The following statements comprise the TAPDP Scale:

1. Professional Development Plans (PDP) often help teachers to develop new teaching techniques.

2. If I did not have to do a Professional Development Plan (PDP), I would not (reverse scored).

3. Professional Development Plans (PDP) are worth the time they take.
4. I have been enriched by the Professional Development Plan (PDP) I completed this year.

5. My Professional Development Plan (PDP) this year has NOT had much impact on my teaching (reverse scored).

The TAP items and TAPDP items were placed in one scale in the questionnaire for the Owen teachers. In order to determine that the new TAPDP scale measured a construct distinguishable from TAP, a factor analysis was conducted based on the responses of 154 educators who participated in this study. The responses to the five TAP questions and the five TAPDP questions were entered into SPSS. Questions that were negatively worded were reverse scored so that a low score on any item indicated a more positive attitude and a high score on any item indicated a less favorable attitude.

Principal component analysis was used to extract factors (components) based on the 5 TAP and 5 TAPDP questions for a total of ten items. The extraction criterion was for eigenvalues greater than 1.0. Two components emerged with eigenvalues greater than 1. Component 1 had an eigenvalue of 4.90 and Component 2 had an eigenvalue of 1.90. The remaining components had eigenvalues ranging from .142 to .949. Examination of the scree plot also suggested a two factor model. Next using maximum likelihood factor analysis two factors were rotated using a Varimax rotation procedure. The rotated solution, shown in Table 1, yielded two factors, TAP and TAPDP. The TAP factor (which contained the five items from the original TAP scale by Torff et al., 2005) accounted for 30.28% of the item variance and the TAPDP factor (with the five new items added by the researcher) accounted for 30.26 % of the item variance. In total, the
two factors accounted for 60.54% of the variance in the items. Comrey and Lee (1992) provide guidelines for judging orthogonal factor loadings by suggesting that if several of the items have loadings in the “very good” to “excellent” category the researcher can feel fairly confident in the interpretation of the factor. As shown in Table 1, in this research study the five items that loaded on the factor TAPDP had loadings ranging from .63 (very good) to .86 (excellent).
Table 1

Rotated Factor Matrix for TAP and TAPDP

<table>
<thead>
<tr>
<th>Items</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TAP</td>
</tr>
<tr>
<td>Professional development workshops often help teachers to develop new teaching techniques.</td>
<td>.792</td>
</tr>
<tr>
<td>Professional development events are worth the time they take.</td>
<td>.788</td>
</tr>
<tr>
<td>I have been enriched by the teacher training events I have attended.</td>
<td>.887</td>
</tr>
<tr>
<td>If I did not have to attend inservice workshops, I would not.*</td>
<td>.614</td>
</tr>
<tr>
<td>Staff development initiatives have NOT had much impact on my teaching.*</td>
<td>.650</td>
</tr>
<tr>
<td>Professional Development Plans (PDP) often help teachers to develop new teaching techniques.</td>
<td>.248</td>
</tr>
<tr>
<td>I have been enriched by the Professional Development Plan (PDP) I completed this year.</td>
<td>.202</td>
</tr>
<tr>
<td>Professional Development Plans (PDP) are worth the time they take.</td>
<td>.153</td>
</tr>
<tr>
<td>If I did not have to do a Professional Development Plan (PDP), I would not.*</td>
<td>.190</td>
</tr>
<tr>
<td>My Professional Development Plan (PDP) this year has NOT had much impact on my teaching.*</td>
<td>.214</td>
</tr>
</tbody>
</table>

* Reverse scored items

Note. **Bold** indicates the item’s strongest loading. * Reverse scored items

The Teachers’ Attitudes toward the Professional Development Plan (TAPDP)

Scale was assessed for its construct validity after the data were collected. This was accomplished by performing a factor analysis on the TAP and TAPDP items. The five items from the TAP instrument loaded on one factor and the five items from TAPDP loaded on a separate factor. This indicates that the construct Teachers’ Attitudes toward
Professional Development the Plan is different from the construct Teachers’ Attitudes about Professional Development.

To assess its reliability the new TAPDP scale was subjected to an assessment of its internal consistency after the data were collected. One of the most commonly used methods of estimating the internal consistency reliability of an instrument is the coefficient alpha, also known as Cronbach’s alpha (Yocky, 2008). Cronbach’s alpha is a measure of reliability, where the higher the coefficient, more consistently the individual items vary with the total score on the instrument (Salkind, 2008). The higher the value, the more likely it is that the scale is internally consistent or measures one thing. For TAPDP, the value of the coefficient alpha is .88 which indicates a very high degree of internal consistency among the items on the instrument. The results of the factor analysis, the assessment of internal consistency, and the establishment of the construct validity indicate that TAPDP is robust enough to use for the analysis of this study’s research questions.

**PDP Process, School Goals, Collaboration, and Student Learning Survey**

The PDP Process, School Goals, Collaboration, and Student Learning Survey contains seven statements (see Appendix K). Each statement is followed by a five-point scale (1 = Not at all, 2 = Very little, 3 = Some, 4 = Quite a bit, 5 = A great deal). The four items in the instrument pertaining to the PDP process are: (a) To what extent did writing a goal statement/PDP question help you develop your PDP, (b) To what extent did describing your strategies/activities for reaching your PDP goals assist you in successfully completing your PDP, (c) To what extent did collecting evidence of your
progress on your PDP assist you in completing your PDP, (d) To what extent did reflecting on the evidence and results of your PDP impact your growth professionally?
The survey also asked: (a) To what extent was your PDP informed by school goals, (b) To what extent did you collaborate with another educator(s) on your PDP, (c) To what extent did your PDP have a positive impact on student learning?

In summary, three instruments were used to capture the major concepts in this study: the School Culture Survey; the Teachers’ Attitudes toward the Professional Development Plan Scale; and the PDP Process, School Goals, Collaboration, and Student Learning Survey. In addition to the three instruments described above, teachers responded to demographic questions. Finally, teachers were provided with the option to respond to the following statement: Please share anything else about the PDP process you think is important. These open-ended responses were collected for future data analysis. Some of the comments are included in chapter 5 to illustrate the quantitative findings from the inferential statistical analyses described in chapter 4.

**Online Survey Tool to Collect Data**

In the past the researcher has used SSG, an online survey tool provided by George Mason University, to collect data. For the current study, the decision was made to use SurveyMonkey instead of SSG. SurveyMonkey (http://www.surveymonkey.com) allowed the researcher to design an online questionnaire that was colorful and easy to navigate. Questions were “chunked” into manageable sections for teachers to answer, which was not possible with SSG. With a paid subscription, SurveyMonkey allowed for an unlimited number of questions and responses. The link to the online questionnaire was
easily copied and pasted into the emails that were sent to principals about the survey. Collected data were downloaded from SurveyMonkey and imported into Excel and Statistical Package for the Social Sciences (SPSS) Version 16.0.

**Field Test**

The questionnaire, which included all the instruments described previously, was subjected to a field pretest. “The purpose of such pretests is to find out how the data collection protocols and the survey instruments work under realistic conditions” (Fowler, 2002, p. 112). It is suggested that a questionnaire be given to people similar to those who will make up the sample (Nardi, 2003). The researcher recruited three teachers who were working on Professional Development Plans to complete the online questionnaire (see Appendix M). The teachers represented elementary and secondary levels, as well as classroom and specialist teachers. Afterwards, the researcher discussed the survey instrument with each teacher. One topic Fowler (2002) recommends discussing during the pretesting is whether the instructions were clear. According to Nardi (2003) respondents should be encouraged to say what they found confusing, how they reacted to the format and questions, and what they felt was missing. The respondents were asked how long the questionnaire took to complete. Internet surveys must be relatively short, as 15 minutes is considered a long time for an Internet survey (Czaja & Blair, 2005, as cited by de Leeuw, 2008). Based on the field test, the questionnaire took approximately 11 minutes to complete. Dillman (2008) recommends starting a questionnaire with the most interesting items first. The researcher asked the teachers piloting the questionnaire what they thought the most interesting items were, the school culture questions or the PDP
questions. The teachers felt the best way to start the questionnaire was with questions about the PDP. The researcher informed the teachers who participated in the pilot test that they should not participate in the final version of the online questionnaire. The researcher thanked the pilot participants by presenting each of them with a $25 Target gift card. Gift cards were also used as an incentive to recruit participants for the final questionnaire.

Data Analysis

The level of analysis was the individual teacher, as the school district did not approve the researcher’s request to collect school identification data. The data from the online questionnaire were downloaded into Excel and then exported to the computer software package, Statistical Package for the Social Sciences (SPSS) Version 16.0. Following is a description of the dependent and independent variables employed in this study. Next the inferential statistics that were employed to answer each research question are shared.

Dependent Variable

The dependent variable in this research project is Teachers’ Attitudes toward the Professional Development Plan (TAPDP) which can be viewed in Appendix J. The scale is scored on a 6-point scale (1 = strongly agree, 2 = moderately agree, 3 = agree slightly more than disagree, 4 = disagree slightly more than agree, 5 = moderately disagree, and 6 = strongly disagree). The following statements comprise the TAPDP Scale: a) Professional Development Plans (PDP) often help teachers to development new teaching techniques, b) If I did not have to do a Professional Development Plan (PDP), I would not
(reverse scored), c) Professional Development Plans (PDP) are worth the time they take, d) I have been enriched by the Professional Development Plan (PDP) I completed this year, e) My Professional Development Plan (PDP) has NOT had much impact on my teaching (reverse scored).

After recoding the two statements that needed to be reverse scored, the five statements were computed into one variable, TAPDP. TAPDP scores ranged from 1 – 6. A lower TAPDP score reflected a more positive attitude toward the PDP and a higher TAPDP score indicated a less positive attitude toward the PDP. The descriptive statistics for this instrument are presented in Chapter 4. Before using the TAPDP as the dependent variable for the inferential statistics, the TAPDP was recorded so that a high score on TAPDP indicated a more positive attitude toward the PDP. This was done to make the TAPDP Likert ratings in alignment with the Likert ratings of the other instruments employed in this research project. That is, a high rating on any of the instruments indicates a more positive response. The resulting recoded six-point scale became: 1 = strongly disagree, 2 = disagree, 3 = disagree slightly more than agree, 4 = agree slightly more than disagree, 5 = moderately agree, 6 = strongly agree.

Independent Variables

The independent variables for the current study are:

- Five Factors of School Culture – The five factors of school culture that were employed in this study are comprised of the responses to the 35 items that compose the School Culture Survey (SCS). Although the SCS has six factors, only five factors were used in this study. Each item on the SCS is followed by
a 5-point scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree). The School Culture Survey can be viewed in Appendices H and I. The scores on the items that make up each of the factors were summed and then divided by the number of items comprising that factor. The five factors, along with the number of items comprising the factor and an example item are listed below.

- Collaborative Leadership (11 items) – teachers are involved in the decision-making process.
- Teacher Collaboration (6 items) – teachers spend considerable time planning together.
- Professional Development (5 items) – professional development is valued by the faculty.
- School Unity (5 items) – the school mission provides a clear sense of direction for teachers.
- Collegial Support (4 items) – teachers’ ideas are valued by other teachers.

- Years of teaching (Appendix L) – Responses were grouped into six bands: 1 – 6 years, 7 – 11 years, 12 – 15 years, 16 – 20 years, 21 – 29 years, and 30 – 45 years.
- Educator Role (Appendix L) – Teachers described their teaching assignment and the researcher coded the responses as classroom or specialist. See Appendix N.
- Gender (Appendix L) – Male or Female
- Level of Education (Appendix L) – 5 choices, Bachelor's, Master's, Master's plus 30 credits, Master's plus 60 credits, and Doctorate.
- Teaching Level (Appendix L) – Responses were grouped as Pre-K/Elementary and Secondary
- Steps in the PDP Process – 5 choices, 1 = Not at all, 2 = Very Little, 3 = Some, 4 = Quite a bit, 5 = A great deal. The steps in the PDP process include the following items: (a) To what extent did writing a goal statement/PDP question help you develop your PDP? (b) To what extent did describing your strategies/activities for reaching your PDP goals assist you in successfully completing your PDP? (c) To what extent did collecting evidence of your progress on your PDP assist you in completing your PDP? (d) To what extent did reflecting on the evidence and results of your PDP impact your growth professionally?
- PDP Impact on Student Learning – 5 choices, 1 = Not at all, 2 = Very Little, 3 = Some, 4 = Quite a bit, 5 = A great deal, 6 = Not applicable: Due to the nature of my assignment, my plan was not intended to directly impact student learning. The statement was worded as, “To what extent did your PDP have a positive impact on student learning?”
- Level of PDP Collaboration – 5 choices, 1 = Not at all, 2 = Very Little, 3 = Some, 4 = Quite a bit, 5 = A great deal. The statement was worded as, “To what extent did you collaborate with another educator(s) on your PDP?” For the inferential statistics, the response choices 1 and 2 were grouped into the
Less PDP Collaboration Group and the response choices 4 and 5 were grouped into the More PDP Collaboration Group. The response choice 3 (Some) was not included in the inferential statistics data analysis. The high collaborators were then compared to the low collaborators on their TAPDP scores.

- Level of PDP Alignment with School Goals - 5 choices, 1 = Not at all, 2 = Very Little, 3 = Some, 4 = Quite a bit, 5 = A great deal. The statement was worded as, “To what extent was your PDP informed by your school’s goals for this year?” For the inferential statistics, the response choices 1 and 2 were grouped into the PDP Less Aligned with School Goals Group and the response choices 4 and 5 were grouped into the PDP More Aligned with School Goals Group. The response choice 3 (Some) was not included in the inferential statistics data analysis. The groups were then compared on their TAPDP scores.

**Descriptive Statistics**

Descriptive statistics are provided in Chapter 4 for the variables employed in the study, including the mean, standard deviation, median and the minimum and maximum scores. A complete description of the sample from the population is also presented in Chapter 4.

**Inferential Statistics**

A variety of inferential statistics were employed to answer the research questions for this study. Pearson product-moment correlation coefficients were calculated and
examined to measure the degree of linear relationship between selected independent variables (see Table 2) and TAPDP. Analysis of Variance (ANOVA) and t tests were used to examine differences between groups. Before each test, homogeneity of variance between the groups was determined by conducting a Levene’s test for equality of variances. In the case of one of the t tests, the distribution of scores between the two groups had unequal variances so the nonparametric Mann-Whitney U test was conducted to examine differences between the groups (see Table 2).

Multiple Linear Regression was utilized to investigate the ability of selected independent variables (see Table 2) to explain the variance in TAPDP scores. For Multiple Linear Regression, the researcher first used the standard regression (enter) method, also called the simultaneous method. Under this method all the predictors related to the specific research question were entered into the model at a single time. The underlying theoretical framework of this research project is school culture, so on a theoretical basis all five of the school culture factors should be given the chance to earn a place in the regression model through the simultaneous method. However, when the combined school culture factors produced a non-significant result for predicting teachers’ attitudes toward the Professional Development Plan, the Stepwise Multiple Linear Regression method was employed. Stepwise has been utilized previously by researchers using the School Culture Survey (Fraley, 2007; Herndon, 2007). In Stepwise, predictors (independent variables) are allowed in the equation if they significantly ($p \leq .05$) add to the predicted variance in the criterion or dependent variable (they are not automatically entered as in the standard method). But if the predictor does not contribute effectively to
the model \( p \leq .10 \) as other independent variables are added, the predictor will be removed. In this research project the SPSS computer program evaluated all the school culture factors and entered the one that correlated most strongly with TAPDP into the equation first. Upon evaluation of the remaining school culture factors, none were found to contribute further explanation to the variance of TAPDP so the procedure stopped at the end of the first step.

The Stepwise Multiple Linear Regression method was employed to determine which steps of the PDP process were better predictors of Teachers’ Attitudes toward Professional Development Plans than others. The regression technique can also explain the dynamics underlying a particular construct (TAPDP) by indicating which variables in combination might be more strongly associated with it. The researcher decided to use the Stepwise regression method, as variables that do not contribute to the prediction of TAPDP would not remain in the model.
Table 2

Research Questions and the Inferential Statistics Used

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Data Analysis Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ #1 To what extent do the five factors of school culture correlate with teachers' attitudes toward the Professional Development Plan (PDP)?</td>
<td>Pearson product-moment correlation coefficient</td>
</tr>
<tr>
<td>RQ #2 Do the factors of school culture predict teachers’ attitudes toward the PDP?</td>
<td>Multiple regression using the Simultaneous (Enter) method and Stepwise method</td>
</tr>
<tr>
<td>RQ #3 To what extent do the steps of the PDP process correlate with teachers’ attitudes toward the PDP?</td>
<td>Pearson product-moment correlation coefficient</td>
</tr>
<tr>
<td>RQ #4 Do the steps of the PDP process predict teachers’ attitudes toward the PDP?</td>
<td>Multiple regression using the Stepwise method</td>
</tr>
<tr>
<td>RQ #5 To what extent do PDPs conducted individually and PDPs conducted collaboratively differ on teachers’ attitudes toward the PDP?</td>
<td>$t$ test</td>
</tr>
<tr>
<td>RQ #6 To what extent do PDPs aligned with school goals and PDPs not aligned with school goals differ on teachers’ attitudes toward the PDP?</td>
<td>Unequal variance $t$ test and Mann-Whitney $U$</td>
</tr>
<tr>
<td>RQ #7 Do teachers’ attitudes toward the PDP differ for their years of teaching, educator role (classroom, specialist), gender, level of education (B.A., Masters, or Ph.D) and teaching level (Elementary, Secondary)?</td>
<td>Analyses of Variance (ANOVA)</td>
</tr>
</tbody>
</table>

Limitations

Ideally, the researcher would have preferred to receive a list with the names of all Owen Public Schools teachers completing Professional Development Plans (PDP) during the 2008-09 school year in order to personally invite each of these teachers to participate in this research study. As this was not approved by the school district, the research design
had some limitations. One limitation is that the invitation to complete the survey was sent to teachers via email by each school’s principal. The reason this is a limitation is that the principal may have chosen not to open the email and/or to forward the information about the research study and the link to the online questionnaire to his/her teachers. To combat this possible limitation, the researcher’s name, research topic, and the Target gift card incentive appeared in the subject line. The researcher offered the Target gift card incentive not only to teachers, but an additional drawing was held exclusively for principals. Another drawback of the survey methodology in this research study is that teachers who did not complete a PDP may have received an invitation to participate in the questionnaire. Ideally, only teachers who completed a PDP responded, but that is something that could not be verified.

Another limitation for this study was the low response rate of 154 teachers. Although the researcher was not able to ascertain the final number of school-based educators completing PDPs for the 2008-2009 school year, district personnel had estimated the number of both school-based and central office educators completing PDPs would be 1,168 teachers, which is significantly more than the 154 teachers who participated. One cause for the low response rate may be that principals did not forward the link for the online questionnaire to teachers. Another possible cause is that online surveys often have low response rates. To combat this limitation, the researcher’s name (familiar to many teachers in the district) and the opportunity to win one of the $50 Target gift cards was placed in the subject heading of the email. In analyzing the data, it
appeared that the teachers who did respond to the survey represented the spectrum of attitudes toward the PDP ranging from very positive to very negative.

It should also be noted that all data were self-reported via the online questionnaire. Surveys are often criticized for eliciting biased, socially desirable responses (Desimone, 2009). However, after reviewing a multitude of research approaches to measure professional development and teaching employed in numerous studies Desimone found that when the data collection is confidential and not linked to a teacher’s own evaluation surveys can elicit much the same information as observations and interviews.

Another limitation of this research study is that the researcher was asked to eliminate the question on the survey that asked teachers to identify their school. Consequently, the results of this study did not take into account differences in the school context. The data collected related to school culture could not be connected to specific schools. Rather, the data indicated individual teachers’ perceptions of their school culture.

The information for this study was gathered from teachers within one school district referencing only one form of teacher Professional Development Plans. Although other school districts may gain insight into factors that may predict teachers’ attitudes toward the PDP, there is limited generalizability because the contexts of other school districts will likely influence teachers’ responses and reactions.
Summary

This study employed a cross-sectional survey design to collect data from 154 prekindergarten through high school teachers. Data were collected via an online questionnaire hosted on the internet. This chapter illustrated the data collection process starting from permission being granted to conduct the research, to field testing, to emailing the questionnaire link to principals to forward to their staff, and concluding with downloading the teachers’ responses into Excel and then SPSS. Also described in this chapter were the development of the instruments, including the School Culture Survey and the Teachers’ Attitudes toward the Professional Development Plan (TAPDP) Scale. The independent and dependent variables were presented and referenced to in the appendices. The descriptive and inferential data analysis methods were also presented. The chapter concluded with a discussion of some of the possible limitations for this research project.
4. Results

The purpose of this study was to investigate the influence of school culture, school goals, and teacher collaboration on teachers’ attitudes toward their Professional Development Plans. The Professional Development Plan (PDP) is a specific professional development model situated within a teacher evaluation system being implemented in the Owen Public Schools. The PDP incorporates many characteristics that research has shown contribute to successful teacher learning including: extending professional development over a significant amount of time, connecting it to teacher practice, encouraging reflection, and being situated in the workplace. Teachers may also choose to align their PDP with their schools’ goals and conduct their PDP collaboratively. In addition, this research project involved collecting data on the various steps of the PDP process. The study was guided by the following questions:

1. To what extent do the five factors of school culture correlate with teachers’ attitudes toward the Professional Development Plan (PDP)?

2. Do the factors of school culture predict teachers’ attitudes toward the PDP?

3. To what extent do the steps of the PDP process correlate with teachers’ attitudes toward the PDP?

4. Do the steps of the PDP process predict teachers’ attitudes toward the PDP?
5. To what extent do PDPs conducted individually and PDPs conducted collaboratively differ on teachers’ attitudes toward the PDP?

6. To what extent do PDPs aligned with school goals and PDPs not aligned with school goals differ on teachers’ attitudes toward the PDP?

7. Do teachers’ attitudes toward the PDP differ for their years of teaching, educator role (classroom, specialist), gender, level of education (B.A., Masters, or Ph.D.) and teaching level (Elementary, Secondary)?

This chapter begins with the descriptive statistics for the participants in the sample along with the descriptive statistics for the variables within this research project. Next the findings from the inferential statistics that were used to answer the research questions in this study are presented. It should be noted that the sample sizes for the analysis of the variables vary slightly from the grand total of 154 participants. This is because some participants did not answer some of the questions.

**Descriptive Statistics for the Sample**

The participants in this study were those school district employees who had completed PDPs and volunteered to complete an online questionnaire. One hundred fifty-four teachers responded to the Teachers’ Attitudes about Professional Development (TAP) and Teachers’ Attitudes toward the Professional Development Plan (TAPDP) questions, with 147 of these teachers completing all or some of the demographic questions. Unless otherwise noted, the demographic questions in the questionnaire were answered by 147 respondents. Of this sample, the average number of years teaching was 15.75 ($SD = 8.27$), ranging from 1 year to 45 years. The median for numbers of years
teaching was 14 years, meaning half the sample had more than 14 years of teaching experience and half had less than 14 years of teaching experience. The researcher divided the years of teaching experience into groups for analysis. Teachers in the 1-6 year band had less experience with the PDP process than the other groups and therefore may have exhibited different attitudes toward the PDP. Similarly, teachers with more than 30 years teaching experience may have expressed different attitudes toward the PDP from other groups. As there were many teachers with 7-20 years experience, the researcher created bands for these years of teaching experience that did not have as large a range as the other groups. Table 3 describes the sample data by years of teaching experience.
Table 3

*Sample Data by Years of Teaching Experience*

<table>
<thead>
<tr>
<th>Years Teaching</th>
<th>Frequency</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid 1-6 yrs</td>
<td>18</td>
<td>12.2</td>
</tr>
<tr>
<td>7-11 yrs</td>
<td>30</td>
<td>20.4</td>
</tr>
<tr>
<td>12-15 yrs</td>
<td>40</td>
<td>27.2</td>
</tr>
<tr>
<td>16 - 20 yrs</td>
<td>23</td>
<td>15.6</td>
</tr>
<tr>
<td>21-29 yrs</td>
<td>27</td>
<td>18.4</td>
</tr>
<tr>
<td>30-45 yrs</td>
<td>9</td>
<td>6.1</td>
</tr>
<tr>
<td>Total</td>
<td>147</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing System</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>154</td>
<td></td>
</tr>
</tbody>
</table>

Educators were classified as either classroom or specialist. Appendix N lists the various teaching roles of the respondents and how they were classified. Eighty-four (57.1%) educators were classified as classroom teachers and 63 (42.9%) were classified as specialists. Of the sample for this research project, 131 (89.1%) were female and 16 (10.9%) were male. Participants represented a variety of educational backgrounds. Sixteen (10.9%) held a Bachelors degree only, 60 (40.0%) held a Masters’ degree, 53 (36.1%) had earned a Masters degree plus 30 credits, 12 (8.2%) had acquired 60 credits beyond a Masters degree and 6 (4.1%) had earned a Doctorate. For teaching level, 144 respondents provided usable data. Ninety-eight (68.1%) of teachers taught at the Pre-
K/Elementary level and 46 (31.9%) taught at the secondary level. The researcher attempted to gather demographic information for the entire population of school-based teachers completing PDPs for the 2008-2009 school year in the Owen Public Schools. However, the school division does not track the demographic characteristics of the educators fulfilling their PDPs, and as such no comparative data were available.

**Descriptive Statistics for Instruments**

The instruments used in this study were (a) the School Culture Survey, (b) the Teachers’ Attitudes toward the Professional Development Plan Scale, and (c) the PDP Process Survey. Each is described next.

**School Culture Survey**

The School Culture Survey is composed of 35 items. These 35 items make up 6 subscales, 5 of which were used in this research study. The subscales that were used are (a) Collaborative Leadership, (b) Teacher Collaboration, (c) Professional Development, (d) Unity of Purpose, and (e) Collegial Support (Gruenert, 1998). Each item was followed by a five-point scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree). The mean score, standard deviation, and other descriptive data for each subscale are shown in Table 4. The subscales with the largest standard deviations were Collaborative Leadership (.86) and Teacher Collaboration (.73). The mean score for each of the five subscales fell between 3.11 and 3.96. The subscale Unity of Purpose had the highest mean (3.96) indicating it was the most favorable and the subscale Teacher Collaboration had the lowest mean (3.11) indicating it was the least favorable. It should be noted that the mean answer choice for both subscales was in the range of neutral.
However, when looking at the median score for each of these two subscales, Teacher Collaboration had a median score of 3.17 and Unity of Purpose had a median score of 4.00. The Teacher Collaboration subscale contained the item with the lowest mean of all the statements on the instrument: “Teachers take time to observe each other teaching.” The mean score on this item was 2.36, while all other mean scores on the instrument scored 3.0 or higher.

Table 4

School Culture Survey Subscale Descriptive Data

<table>
<thead>
<tr>
<th>School Culture Survey Subscales</th>
<th>n</th>
<th>M</th>
<th>Mdn</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative Leadership</td>
<td>147</td>
<td>3.49</td>
<td>3.64</td>
<td>.861</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Teacher Collaboration</td>
<td>147</td>
<td>3.11</td>
<td>3.17</td>
<td>.727</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Professional Development</td>
<td>147</td>
<td>3.79</td>
<td>3.80</td>
<td>.583</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Unity of Purpose</td>
<td>147</td>
<td>3.96</td>
<td>4.00</td>
<td>.628</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Collegial Support</td>
<td>147</td>
<td>3.89</td>
<td>4.00</td>
<td>.652</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

Tables 5-9 present the item mean scores along with other descriptive statistics for each statement that contributes to each of the 5 subscales from the School Culture Survey. Of the 35 items on the instrument, “Teachers take time to observe each other teaching” had the lowest mean (2.36) indicating teachers disagreed with this statement. The item with the highest mean score (4.16) was “Teachers support the mission of the school” indicating that teachers agreed with this statement.
As observed in Table 5, the respondents tended to be positive about the nature of collaborative leadership in their school. Held in highest regard by teachers was the item “Teachers are encouraged to share their ideas” ($M = 3.82$). As indicated by the median score, over half the teachers agree or strongly agree that leaders in their schools support risk-taking and innovation in teaching ($Mdn = 4.00$). Teachers were divided in half at the midpoint of the scale ($Mdn = 3.00$) in their agreement to the statement, “Teachers are rewarded for experimenting with new ideas and techniques.”
Table 5

**Collaborative Leadership Descriptive Statistics**

<table>
<thead>
<tr>
<th>Collaborative Leadership Subscale Items</th>
<th>n</th>
<th>M</th>
<th>Mdn</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative Leadership Subscale</td>
<td>147</td>
<td>3.49</td>
<td>3.64</td>
<td>.861</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Leaders value teachers' ideas</td>
<td>148</td>
<td>3.43</td>
<td>4.00</td>
<td>1.095</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Leaders in this school trust the professional judgment of teachers</td>
<td>148</td>
<td>3.59</td>
<td>4.00</td>
<td>1.239</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Leaders take time to praise teachers that perform well</td>
<td>148</td>
<td>3.36</td>
<td>4.00</td>
<td>1.184</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Teachers are involved in the decision-making process</td>
<td>148</td>
<td>3.30</td>
<td>4.00</td>
<td>1.116</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Leaders in our school facilitate teachers working together</td>
<td>148</td>
<td>3.53</td>
<td>4.00</td>
<td>1.040</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Teachers are kept informed on current issues in the school</td>
<td>147</td>
<td>3.69</td>
<td>4.00</td>
<td>1.038</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>My involvement in policy or decision making is taken seriously</td>
<td>147</td>
<td>3.27</td>
<td>4.00</td>
<td>1.172</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Teachers are rewarded for experimenting with new ideas and techniques</td>
<td>147</td>
<td>3.24</td>
<td>3.00</td>
<td>1.029</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Leaders support risk-taking and innovation in teaching</td>
<td>147</td>
<td>3.59</td>
<td>4.00</td>
<td>1.012</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Administrators protect instruction and planning time</td>
<td>147</td>
<td>3.59</td>
<td>4.00</td>
<td>1.163</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Teachers are encouraged to share ideas</td>
<td>147</td>
<td>3.82</td>
<td>4.00</td>
<td>.951</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

As displayed in Table 6, very few teachers took time to observe each other teaching (\(M = 2.36\)). The data also indicated that teachers were less inclined to openly voice and discuss teaching practice disagreements (\(M = 2.78\)). The median scores indicated that half the respondents agree or strongly agree that teachers were generally
aware of what other teachers are teaching and that teachers work together to develop and evaluate programs and projects.

Table 6

*Teacher Collaboration Descriptive Statistics*

<table>
<thead>
<tr>
<th>Teacher Collaboration Subscale Items</th>
<th>n</th>
<th>M</th>
<th>Mdn</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Collaboration Subscale</td>
<td>147</td>
<td>3.11</td>
<td>3.17</td>
<td>.727</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Teachers have opportunities for dialogue and planning across grades and subjects</td>
<td>148</td>
<td>3.22</td>
<td>3.00</td>
<td>1.110</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Teachers spend considerable time planning together</td>
<td>148</td>
<td>3.28</td>
<td>3.00</td>
<td>1.119</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Teachers take time to observe each other teaching</td>
<td>148</td>
<td>2.36</td>
<td>2.00</td>
<td>1.011</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Teachers are generally aware of what other teachers are teaching</td>
<td>147</td>
<td>3.44</td>
<td>4.00</td>
<td>1.001</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Teachers work together to develop and evaluate programs and projects</td>
<td>147</td>
<td>3.56</td>
<td>4.00</td>
<td>.923</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Teaching practice disagreements are voiced openly and discussed</td>
<td>147</td>
<td>2.78</td>
<td>3.00</td>
<td>1.019</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

As presented in Table 7, the item that was held in highest regard by teachers was “The faculty values school improvement” (*M* = 4.07). The next highest item mean was “Teachers utilize professional networks to obtain information and resources for classroom instruction” (*M* = 3.95). As indicated by the median score half the teachers agree or strongly agree that professional development is valued by the faculty, although the mean score for this item aligns with the response choice neutral. The range for this
item, along with the item “Teachers regularly seek ideas from seminars, colleagues, and conferences” was greater than the other items that make up this subscale indicating teachers possessed a wide range of opinions on these statements. As can be seen by looking at the standard deviation, the item “Professional development is valued by the faculty” had the largest variance.

Table 7

*Professional Development Descriptive Statistics*

<table>
<thead>
<tr>
<th>Professional Development Subscale Items</th>
<th>n</th>
<th>M</th>
<th>Mdn</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Development Subscale</td>
<td>147</td>
<td>3.79</td>
<td>3.80</td>
<td>.583</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Teachers utilize professional networks to obtain information and resources for classroom instruction</td>
<td>148</td>
<td>3.95</td>
<td>4.00</td>
<td>.722</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Teachers regularly seek ideas from seminars, colleagues, and conferences</td>
<td>148</td>
<td>3.66</td>
<td>4.00</td>
<td>.846</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Professional development is valued by the faculty</td>
<td>148</td>
<td>3.34</td>
<td>4.00</td>
<td>1.034</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Teachers maintain a current knowledge base about the learning process</td>
<td>147</td>
<td>3.90</td>
<td>4.00</td>
<td>.719</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>The faculty values school improvement</td>
<td>147</td>
<td>4.07</td>
<td>4.00</td>
<td>.713</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

Data presented in Table 8 indicated that many teachers believed there is a strong unity of purpose within their school; the median score for all items was 4.00 indicating that half the teachers agree or strongly agree with the statements making up the subscale Unity of Purpose. The item held in the highest regard by teachers was “Teachers support
the mission of the school” \((M = 4.16)\). The lowest mean response was for the item “The school mission provides a clear sense of direction for teachers” \((M = 3.72)\) indicating a neutral feeling from teachers about this statement.

Table 8

Unity of Purpose Descriptive Statistics

<table>
<thead>
<tr>
<th>Unity of Purpose Subscale Items</th>
<th>(n)</th>
<th>(M)</th>
<th>(Mdn)</th>
<th>(SD)</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unity of Purpose</td>
<td>147</td>
<td>3.96</td>
<td>4.00</td>
<td>.628</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Teachers support the mission of the school</td>
<td>148</td>
<td>4.16</td>
<td>4.00</td>
<td>.707</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>The school mission provides a clear sense of direction for teachers</td>
<td>148</td>
<td>3.72</td>
<td>4.00</td>
<td>.946</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Teachers understand the mission of the school</td>
<td>147</td>
<td>3.90</td>
<td>4.00</td>
<td>.909</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>The school mission statement reflects the values of the community</td>
<td>147</td>
<td>4.02</td>
<td>4.00</td>
<td>.667</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Teaching performance reflects the mission of the school</td>
<td>147</td>
<td>4.00</td>
<td>4.00</td>
<td>.682</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

As presented in Table 9, many teachers perceived strong collegial support within their schools: the median score for all items was 4.00 indicating that half the teachers agree or strongly agree with the statements making up the subscale Unity of Purpose. The item held in the highest regard by teachers was “Teachers are willing to help out whenever there is a problem” \((M = 4.07)\). The mean score for the statement, “Teachers work cooperatively in group” \((M = 3.73)\) indicated teachers feel neutral about this
statement. However, the median scores indicated that half the teachers agree or strongly agree that teachers work cooperatively in groups.

Table 9

*Collegial Support Descriptive Statistics*

<table>
<thead>
<tr>
<th>Collegial Support Subscale Items</th>
<th>n</th>
<th>M</th>
<th>Mdn</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collegial Support Subscale</td>
<td>147</td>
<td>3.89</td>
<td>4.00</td>
<td>.652</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Teachers trust each other</td>
<td>148</td>
<td>3.78</td>
<td>4.00</td>
<td>.821</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Teachers are willing to help out whenever there is a problem</td>
<td>148</td>
<td>4.07</td>
<td>4.00</td>
<td>.809</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Teachers’ ideas are valued by other teachers</td>
<td>148</td>
<td>3.98</td>
<td>4.00</td>
<td>.714</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Teachers work cooperatively in groups</td>
<td>147</td>
<td>3.73</td>
<td>4.00</td>
<td>.946</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

This section of the chapter examined the descriptive statistics for the items and subscales that make up the School Culture Survey. All but one of the items in each of the subscales Collaborative Leadership and Teacher Collaboration had standard deviations over one indicating more variability in responses than the subscales Professional Development, Unity of Purpose and Collegial Support. Of the latter three subscales mentioned, only Professional Development contained a single item with a standard deviation over one. Unity of Purpose and Collegial Support items all had standard deviations under one, showing there was not as much variability in the responses on these
subscales. In looking at the median scores for each item that makes up each subscale, every item in Professional Development, Unity of Purpose and Collegial Support had a median score of 4.00 and Collaborative Leadership had ten out of eleven statements with a median score of 4.00. This indicated that half the teachers agree or strongly agree with the statements that make up these subscales, while the other half of the respondents are either neutral, disagree, or strongly disagree. The median score for each item on the subscale Teacher Collaboration ranged from 2.00 – 4.00, indicating a range of perceptions on the multiple statements that make up this subscale. In summary, the mean score for each of the subscales was in the neutral range but the mean score only tells part of the story. By looking at how the values vary from the mean with the standard deviation a much more complete picture of the data is provided. The standard deviation indicated there is not much variability from the mean on any of the School Culture subscales, although there is variability with the individual items that make up each subscale.

**Teachers’ Attitudes toward the Professional Development Plan Scale**

Teachers’ Attitudes toward the Professional Development Plan (TAPDP) Scale consists of five statements. Each statement is followed by a six-point scale (1 = strongly agree, 2 = moderately agree, 3 = agree slightly more than disagree, 4 = disagree slightly more than agree, 5 = moderately disagree, 6 = strongly disagree). It should be noted that this scale is reversed from the scale described above for the School Culture Survey: A 1 on the SCS means strongly disagree and a 1 on the TAPDP means strongly agree. The descriptive statistics for each statement that contributes to the TAPDP scale are presented
in Table 10. Items that were worded negatively and then were reverse scored are indicated by an asterisk (*).

One hundred fifty-four educators responded to the TAPDP statements. The response that received the lowest mean (3.27) and therefore the most positive attitude toward the item was “Professional Development Plans (PDP) often help teachers to develop new teaching techniques.” The next lowest mean (3.32) was, “I have been enriched by the PDP I completed this year.” The response that had the highest mean, and therefore indicated a less than positive attitude was “If I did not have to do a PDP, I would not.” In other words, most teachers would not participate in the PDP process if it were not required, yet as a result of the PDP process teachers have developed new teaching techniques and have been enriched professionally. However, to temper this statement, it should be noted a 3 on the scale means agree slightly more than disagree with the statement. As the median is not influenced by extreme scores, it is valuable to note the median value for the statement “If I did not have to do a PDP, I would not” was 5. That indicated that over half the respondents reported a moderate to strong negative attitude toward the PDP on this statement. The TAPDP scale, which is the dependent variable in this study, had a mean of 3.62, a median of 3.60, and a standard deviation of 1.31. The scores ranged from 1 to 6.
Table 10

*Teachers’ Attitudes toward the Professional Development Plan*

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>M</th>
<th>Mdn</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Development Plans (PDP) often help teachers to develop new teaching techniques.</td>
<td>154</td>
<td>3.27</td>
<td>3.00</td>
<td>1.492</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>If I did not have to do a PDP, I would not*</td>
<td>154</td>
<td>4.36</td>
<td>5.00</td>
<td>1.656</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>PDPs are worth the time they take.</td>
<td>154</td>
<td>3.69</td>
<td>4.00</td>
<td>1.556</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>I have been enriched by the PDP I completed this year.</td>
<td>154</td>
<td>3.32</td>
<td>3.00</td>
<td>1.579</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>My PDP this year has NOT had much impact on my teaching*</td>
<td>154</td>
<td>3.44</td>
<td>3.00</td>
<td>1.684</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

Note. Scaling for the reversed items (*) has been adjusted so that lower scores on all items reflect positive attitudes about Professional Development Plans.

Later in the study, the TAPDP scale was recoded so a high score on TAPDP indicated a more positive attitude toward the PDP. This was done to make the TAPDP Likert ratings in alignment with the Likert ratings of the other instruments employed in this research project. That is, a high rating on any of the instruments indicated a more positive response. The recoded TAPDP will be used in the section of this chapter involving the inferential statistics applied to address the research questions. The resulting recoded six-point scale became: 1 = strongly disagree, 2 = disagree, 3 = disagree slightly more than agree, 4 = agree slightly more than disagree, 5 = moderately agree, 6 = strongly agree.
PDP Process Survey

The PDP Process Survey contains four questions that describe the steps in the PDP process. Each statement is followed by a five-point scale (1 = Not at all, 2 = Very little, 3 = Some, 4 = Quite a bit, 5 = A great deal). The four items in the instrument are:

(a) To what extent did writing a goal statement/PDP question help you develop your PDP, (b) To what extent did describing your strategies/activities for reaching your PDP goals assist you in successfully completing your PDP, (c) To what extent did collecting evidence of your progress on your PDP assist you in completing your PDP, and (d) To what extent did reflecting on the evidence and results of your PDP impact your growth professionally? The PDP Process Survey descriptive statistics for 150 educators are displayed in Table 11. The mean for each item was close to 3.00, which indicates Some as to the extent a particular step in the process assisted the educator in the PDP process. From the range it is evident that participants responded from 1 (Not at all) through 5 (A great deal) for each step in the process. This indicated that some teachers found a particular step in the PDP process helpful while other educators did not.
Table 11

*PDP Process Survey Descriptive Statistics*

<table>
<thead>
<tr>
<th>Activity</th>
<th>n</th>
<th>M</th>
<th>Mdn</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing a goal statement/PDP question help develop PDP</td>
<td>150</td>
<td>2.99</td>
<td>3.00</td>
<td>1.173</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Describing strategies/activities for reaching PDP goals assists in successfully completing PDP</td>
<td>150</td>
<td>3.31</td>
<td>3.00</td>
<td>1.088</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Collecting evidence of progress on PDP assists in completing PDP</td>
<td>150</td>
<td>3.24</td>
<td>3.00</td>
<td>1.060</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Reflecting on evidence and results of PDP impacts teacher growth professionally</td>
<td>150</td>
<td>3.24</td>
<td>3.00</td>
<td>1.163</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

The histogram for each step of the PDP process can be seen in Figures 2–5. The figures compliment the information contained in Table 11 and provide a more thorough understanding of the data. In Figure 2 the data models an almost perfect bell-shaped curve for a normal distribution of data. About one-third (35.3%) of the respondents judged that writing a goal statement helped develop their PDP *Not at all* or *Very little*. About one-third (29.3%) responded with *Some* and about one-third (35.4%) responded that writing a goal statement helped develop their PDP *Quite a bit* or *A great deal*. The data showed there was a wide range of perceptions as to the value of writing a PDP goal statement in order to successfully complete a PDP.
Figure 2. Writing a goal statement/PDP question helps develop the PDP.

As presented in Figure 3, almost half (47.4%) of teachers believed that describing strategies/activities for reaching their PDP goals assisted them *Quite a bit* or *A great deal* in successfully completing their PDP. Thirty-three teachers (22%) felt that describing strategies and activities for reaching their PDP goals assisted them *Not at all* or *Very little* in successfully completing their PDP.
Figure 3. Describing strategies/activities for reaching PDP goals assists in successfully completing PDP.

As shown in Figure 4, a substantial proportion (34%) of teachers indicated that collecting evidence of progress on their PDP assisted them Some in completing their PDP. Thirty-seven teachers (24.7%) felt that collecting evidence of progress on their PDP helped Not at all or Very little with completing their PDP. Sixty-one (40.7%) teachers believed that collecting evidence of progress on their PDP helped Quite a bit or A great deal in completing their PDP.
As displayed in Figure 5, a substantial proportion (44.7%) of teachers believed that reflecting on evidence and results of the PDP impacted their growth professionally *Quite a bit* or *A great deal*. About one-fourth of teachers (27.3%) indicated that reflecting on evidence and results of the PDP impacted their professional growth *Not at all* or *Very little*. 

*Figure 4. Collecting evidence of progress on PDP assists in completing PDP.*

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Figure 5. Reflecting on evidence and results of PDP impacts teacher growth professionally.

Descriptive Statistics for Level of PDP Alignment with School Goals, Level of PDP Collaboration, and PDP Impact on Student Learning

In addition to the questions described thus far, educators responded to the following three questions:

- To what extent was your PDP informed by school goals?
- To what extent did you collaborate with another educator(s) on your PDP?
- To what extent did your PDP have a positive impact on student learning?
Each statement was followed by a five-point scale (1 = Not at all, 2 = Very little, 3 = Some, 4 = Quite a bit, 5 = A great deal) (see Appendix K). The descriptive statistics for each of the questions are displayed in Table 12. A description of the statistics, along with a histogram for each of the questions follows the table.

Table 12

PDP Alignment with School Goals, Level of PDP Collaboration, and PDP Impact on Student Learning

<table>
<thead>
<tr>
<th>PDP alignment with school goals</th>
<th>150</th>
<th>2.99</th>
<th>3.00</th>
<th>1.39</th>
<th>1</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDP Collaboration</td>
<td>150</td>
<td>3.31</td>
<td>3.50</td>
<td>1.45</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>PDP impact on student learning</td>
<td>133</td>
<td>3.50</td>
<td>3.00</td>
<td>1.02</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

One hundred fifty educators responded to the question, “To what extent was your PDP informed by school goals?” Fifty-seven (38%) responded Quite a bit or a Great Deal, while 54 (36%) answered Not at all or Very little. The one answer choice that was selected with the greatest frequency was Some (25.3%), suggesting that PDPs were loosely connected to school goals. The mean score was 2.99, the median score was 3.0, and the standard deviation was 3.0. Answers choices ranged from 1 to 5. The histogram with the responses can be seen in Figure 6.
For the question “To what extent did you collaborate with another educator(s) on your PDP”, 75 (48.7%) responded *Quite a bit* or *A great deal*, while 46 responded *Not at all* or *Very little*. The one answer choice that was selected with the greatest frequency was *A great deal* (28.7%), suggesting that many teachers collaborated on PDPs. The mean score was 3.31, the median score was 3.50, and the standard deviation was 1.45. Answer choices ranged from 1 – 5. The histogram of responses can be seen in Figure 7, which also shows the slightly negative skewness of the distribution.
For the question, “To what extent did your PDP have a positive impact on student learning,” teachers also had the option of selecting the following response: *Not applicable: Due to the nature of my assignment, my plan was not intended to directly impact student learning.* Seventeen educators responded to this answer choice, hence these 17 respondents are not included in data presented and are not included in the percentages cited. The mean score was 3.50, the median score was 3.00, and the standard deviation was 1.02. The histogram of responses is presented in Figure 8. The answer choice that was selected most often was *Some* (37.6%), followed by *Quite a bit* (26.3%).

*Figure 7. Collaborate with another educator(s) on PDP.*
suggesting that the majority of teachers perceived that the PDP process does to at least some extent have a positive impact on student learning.

Figure 8. PDP positive impact on student learning.

Inferential Statistics

In the next section of this chapter are the results from the inferential statistics that were employed to answer the research questions for this study. The variables for which these methods were applicable were teacher measures on the TAPDP, the five factors of the School Culture Survey, and the PDP Process, School Goals, Collaboration, and
Student Achievement Survey. The statistical procedures employed were Pearson product-moment correlation coefficient, multiple regression, \( t \) test, unequal variance \( t \) test, Mann-Whitney \( U \) test, and Analysis of Variance (ANOVA). An assumption of using inferential statistics is that the data are normally distributed. One method the researcher used to examine normality was to create a histogram in SPSS with the normal curved superimposed. This provided a useful graphical representation of the data and a first look for outliers. Another graphical method of studying the distribution of the data and looking for outliers was creating box plots in SPSS. Although there is no universally accepted criterion for declaring an item to be an outlier, one suggestion is to use standardized values (\( z \)-scores). Anderson, Sweeney, and Williams (2006) recommended “treating any data value with a \( z \)-score less than -3 or greater than +3 as an outlier” (p. 98). Before conducting any inferential statistics, the researcher converted each variable to a \( z \)-score, meaning they were standardized with a mean of zero and a standard deviation of 1. Cohen & Cohen (1983) recommended that “if the outliers are few (less than 1% or 2% of \( n \)) and not very extreme, they are probably best left alone” (p. 128). As there were only two outliers total on two different variables, these values were not removed from the analyses.

For multivariate analyses, such as with multiple linear regressions, the data were examined for outliers using Mahalanobis distance. Each case was evaluated using the chi-square distribution with an alpha level of .001. As no more than one outlier was found, all cases were included in the analyses.
Two techniques that contribute further understanding of the normality of the data are skewness and kurtosis. For both skewness and kurtosis a value between ±1 is considered excellent for most psychometric purposes and a value between ±2 is generally acceptable (George & Mallery, 2009). Because the skewness and kurtosis values for the distribution of the sample for this research study were within the +2.0 – to -2.0 ranges they were deemed acceptable.

Data were also checked for multicollinearity among the independent or predictor variables. Multicollinearity occurs when there are moderate to high correlations among the predictor variables. One way to assess multicollinearity is to examine the level of tolerance for each variable. Tolerance is the amount of a predictor’s variance not accounted for by the other predictors. “Lower tolerance values indicate that there are stronger relationships (increasing the chance of obtaining multicollinearity) between the predictor variables” (Meyers, Gamst, & Gaurino, 2006). The tolerance may have values ranging from 0.00 to 1.00. The closer the tolerance is to 1.00, the lower the multicollinearity caused by the predictors. Meyers et al. suggested that if the predictor variables have tolerance values greater than .01, then multicollinearity should not be a concern when performing multiple linear regressions. In this research project, all the predictor variables had tolerance values greater than .32. The researcher also checked the reciprocal of the tolerance, the Variance Inflation Factor (VIF). A VIF greater than 10 is indicative of multicollinearity (Meyers, 1990, as cited by Meyers et al., 2006). No data values exceeded this limit, with the highest VIF being 3.17, which suggested the
independent variables were not so highly correlated with each other as to cause problems when conducting a multiple linear regression.

The following section of this chapter presents the data analysis results from the inferential statistics. The section is organized by research question, starting with Research Question 1. As noted in Chapter 3, when discussing the construct of school culture the terms “factor” and “subscale” are used interchangeably.

**Research Question 1**

The first research question investigated the extent to which teachers’ attitudes toward the Professional Development Plan (TAPDP) correlated with the five factors of school culture: Collaborative Leadership, Teacher Collaboration, Professional Development, Unity of Purpose, and Collegial Support. The Pearson product-moment correlation coefficient, or Pearson $r$, was used to measure the degree of the linear relationship between each subscale of school culture and TAPDP.

Four of the five subscales of school culture correlated positively and significantly with Teachers’ Attitudes toward the Professional Development Plan (TAPDP), as shown in row 1 of Table 13. Although statistically significant, the relationships were weak for practical purposes. Often in correlational research the values of $r$ of $\pm .1$, $\pm .3$, and $\pm .5$ correspond to small, medium, and large effect sizes, respectively (Cohen, 1988, as cited in Meyers et al., 2006). All subscales showed correlations below $\pm .3$, with $r$ values ranging from .09 (Collegial Support) to .21 (Professional Development) suggesting small effect sizes or low relationship of the TAPDP scores to (a) Collaborative Leadership, (b) Teacher Collaboration, (c) Professional Development, (d) Unity of Purpose, and (e)
Collegial Support. Professional Development and TAPDP showed the strongest association and it was significant \((p < .01)\). No significant relationship was found between Collegial Support and TAPDP. As to be expected, each subscale for the School Culture Survey correlated positively and significantly with each of the other subscales. As summarized in Table 13, the bivariate correlations ranged from \(r\) values of .53 to .77. These values show moderately strong relationships.

Table 13

*Correlation Matrix for Factors of School Culture and Teachers’ Attitudes toward the Professional Development Plan (n = 147)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. TAPDP</td>
<td>-</td>
<td>.19*</td>
<td>.17*</td>
<td>.21**</td>
<td>.19*</td>
<td>.09</td>
</tr>
<tr>
<td>2. Collaborative Leadership</td>
<td>-</td>
<td>.67**</td>
<td>.56**</td>
<td>.59**</td>
<td>.53**</td>
<td></td>
</tr>
<tr>
<td>3. Teacher Collaboration</td>
<td>-</td>
<td>.70**</td>
<td>.53**</td>
<td>.53**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Professional Development</td>
<td>-</td>
<td>.66**</td>
<td>.77**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Unity of Purpose</td>
<td>-</td>
<td>.60**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Collegial Support</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\*\(p < .05\). **\(p < .01\).

**Research Question 2**

The second research question examined the factors of school culture for their ability to predict teachers’ attitudes toward the PDP. This question was addressed by
using a multiple regression where the dependent (criterion) variable TAPDP was predicted from the five independent variables (predictors) Collaborative Leadership, Teacher Collaboration, Professional Development, Unity of Purpose and Collegial Support. The collinearity statistics showed no multicollinearity or extremely high intercorrelation between the predictor variables. Tolerance values ranged from .315 to .484, which exceed the .01 levels that suggest multicollinearity. The VIF for the predictor variables ranged from 2.066 to 3.171, well below the level of 10 where multicollinearity becomes a problem. As the tolerance and VIF values were well within normal bounds, there was no indication that multicollinearity was present among the predictor variables. As only one outlier was identified using Mahalanobis distance, the data set was analyzed with all 147 cases.

The School Culture Survey is comprised of 6 factors or subscales (5 of which were employed in this study) that illustrate various facets of school culture, a theoretical basis for this research project. As such, all five components should be included in the regression model. The researcher decided to use the standard regression model, also called the simultaneous method. Under this method all the predictors were entered into the model at a single time. The reason this method was selected is based on the assumption that “the variables were selected on the basis of their relevance to theory or at least on the basis of hypotheses based on a comprehensive review of existing literature on the topic, the standard model provides an opportunity to see how they fare as a set in predicting the dependent variable” (Meyers et al., 2006, p.175).
The regression results are summarized in Table 14. The linear combination of the factors of school culture did not significantly predict teachers’ attitudes toward Professional Development Plans, $F(5, 141) = 2.16, p > .05, R^2 = .07$. As the $F$ value was not statistically significant, there was no need to proceed with further analysis because the prediction of the criterion variable (TAPDP) using this model was no better than chance.

Table 14

*Summary of Multiple Regression for School Culture Variables Predicting Teachers’ Attitudes toward Professional Development Plans (n = 147)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative Leadership</td>
<td>.13</td>
<td>.18</td>
<td>.09</td>
<td>.72</td>
<td>.47</td>
</tr>
<tr>
<td>Teacher Collaboration</td>
<td>.07</td>
<td>.25</td>
<td>.04</td>
<td>.28</td>
<td>.78</td>
</tr>
<tr>
<td>Professional Development</td>
<td>.56</td>
<td>.33</td>
<td>.25</td>
<td>1.70</td>
<td>.09</td>
</tr>
<tr>
<td>Unity of Purpose</td>
<td>.20</td>
<td>.25</td>
<td>.09</td>
<td>.80</td>
<td>.46</td>
</tr>
<tr>
<td>Collegial Support</td>
<td>-.44</td>
<td>.28</td>
<td>-.22</td>
<td>-1.59</td>
<td>.12</td>
</tr>
</tbody>
</table>

Note. $R^2 = .07$

Two researchers (Fraley, 2007; Herndon, 2007) used the School Culture Survey factors as predictors for student achievement on standardized tests. Both of these researchers used the Stepwise method of regression. It was decided to employ the
Stepwise method in this study to compare the results from this method with the results from the standard method of regression. In Stepwise, predictors are allowed in the equation if they significantly \((p \leq .05)\) add to the predicted variance in the criterion or dependent variable (they are not automatically entered as in the standard method). But if the predictor does not continue to contribute effectively to the model \((p \geq .10)\) as other independent variables are added, the predictor will be removed. Based on the bivariate correlations of each subscale with TAPDP, the researcher anticipated the school culture factor Professional Development, which had the strongest association with TAPDP, would earn its way into the regression equation.

In SPSS the researcher set the criteria to \(p \leq .05\) for a variable to enter the equation and \(p \geq .10\) for removal if a variable ceases to contribute to the model. The Stepwise method was carried out and the one variable in the predictor set of school culture variables that earned its way into the model was Professional Development \((\beta = .21, t(146) = 2.63, p < .01)\). Multiple R for regression was statistically significant, \(R^2 = .05, R^2_{adj} = .04, F(1, 145) = 6.93, p < .01\). This suggested that teachers who perceived their schools as possessing a strong culture of Professional Development (as measured by SCS) were more likely to have positive attitudes’ toward the Professional Development Plan (as measured with TAPDP). However, when considering its effect, the factor Professional Development explained only a small amount (5%) of the variance in TAPDP.
Research Question 3

The third research question investigated the extent to which teachers’ attitudes toward the Professional Development Plan (TAPDP) correlated with the four steps of the PDP process: Writing a Goal Statement, Describing Strategies/Activities for Reaching PDP Goals, Collecting Evidence of Progress on PDP, Reflecting on Evidence and Results of PDP. The Pearson product-moment correlation coefficient was used to measure the degree of the bivariate linear relationship between each step of the PDP process and TAPDP.

All four steps of the PDP process correlated positively and significantly with Teachers’ Attitudes toward the Professional Development Plan, as shown in row 1 of Table 15. Notable are the medium and large effect sizes, with \( r \) values ranging from .39 (Writing a Goal Statement) to .62 (Reflecting on Evidence and Results). Reflecting on Evidence and Results of the PDP and TAPDP showed the strongest relationship. Each of the steps of the PDP process correlated positively and significantly with each of the other steps. As illustrated in Table 15, the bivariate correlations ranged from \( r \) values of .48 to .74.
Table 15

*Correlation Matrix for Steps of the PDP Process and Teachers’ Attitudes toward the Professional Development Plan (n = 150)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. TAPDP</td>
<td>-</td>
<td>.39**</td>
<td>.50**</td>
<td>.50**</td>
<td>.62**</td>
</tr>
<tr>
<td>2. Writing a Goal Statement/PDP Question</td>
<td>-</td>
<td>.74**</td>
<td>.61**</td>
<td>.48**</td>
<td></td>
</tr>
<tr>
<td>3. Describing Strategies/Activities for Reaching PDP Goals</td>
<td>-</td>
<td></td>
<td>.71**</td>
<td>.60**</td>
<td></td>
</tr>
<tr>
<td>4. Collecting Evidence of Progress on PDP</td>
<td>-</td>
<td></td>
<td></td>
<td>.62**</td>
<td></td>
</tr>
<tr>
<td>5. Reflecting on Evidence and Results of PDP</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p < .01.

**Research Question 4**

The fourth research question examined the steps of the PDP process for their ability to predict teachers’ attitudes toward the Professional Development Plan. This question was addressed by using a multiple regression for the criterion variable TAPDP from the four predictors: Writing a Goal Statement, Describing Strategies/Activities for Reaching PDP Goals, Collecting Evidence of Progress on PDP, Reflecting on Evidence and Results of PDP.

The collinearity statistics showed no multicollinearity; tolerance values ranged from .438 to .533 and VIF values ranged from 2.205 to 2.284. As only one outlier was identified using Mahalanobis distance, the data set was analyzed with all 150 cases.
During the PDP process, teachers progressed through four major steps: Writing a Goal Statement, Describing Strategies/Activities for Reaching PDP Goals, Collecting Evidence of Progress on PDP, and Reflecting on Evidence and Results of PDP. By conducting a multiple regression, the researcher sought to determine which steps of the PDP process (variables) were better predictors of Teachers’ Attitudes toward Professional Development Plans than others. The regression technique can also explain the dynamics underlying a particular construct (TAPDP) by indicating which variables in combination might be more strongly associated with it. The researcher decided to use the Stepwise regression method, as variables that do not contribute to the prediction of TAPDP would not remain in the model. Based on the bivariate correlations of each step of the PDP process with TAPDP, the researcher anticipated that Describing Strategies/Activities for Reaching PDP Goals \( (r = .50) \), Collecting Evidence of Progress on PDP \( (r = .50) \), and Reflecting on Evidence and Results \( (r = .62) \), would earn a place in the regression equation. Writing a Goal Statement/PDP Question had the weakest association with TAPDP \( (r = .36) \) so it was not anticipated to be included in the regression model.

In SPSS the researcher set the criteria to \( p \leq .05 \) for a variable to enter the equation and \( p \geq .10 \) for removal if a variable ceases to contribute to the model. The results of the Stepwise regression are summarized in Table 16. The Stepwise regression yielded two significant models. In the first model (the weaker of the two models) one variable was a significant predictor of TAPDP, Reflecting on Evidence and Results of PDP, \( \beta = .62, t(149) = 9.58, p < .01 \). Multiple \( R \) for regression was statistically significant, \( R^2 = .38, R^2_{adj} = .38, F(1, 148) = 91.53, p < .01 \). The significant predictors of
TAPDP in the final (strongest) model were Describing Strategies/Activities for Reaching PDP Goals, $\beta = .20, t(149) = 2.58, p < .05$ and Reflecting on Evidence and Results of PDP, $\beta = .50, t(149) = 6.22, p < .01$. The two predictor model was significant, $R^2 = .41$, $R^2_{adj} = .40$, $F(2, 147) = 50.83, p < .01$, indicating that approximately 40% of the variance in Teachers’ Attitudes toward Professional Development Plans was explained by two of the steps in the PDP process. It should be noted that when looking at the correlation of Collecting Evidence of Progress on PDP and TAPDP to three decimal places the correlation is $r = .499$ whereas the correlation for Describing Strategies and Activities and TAPDP to three decimal places is $r = .503$. Therefore, the lower $r$ was not brought into the Stepwise equation.

The multiple regression results suggested that Describing Strategies/Activities for Reaching PDP Goals and Reflecting on Evidence and Results of PDP were more likely to influence teachers’ attitudes toward the Professional Development Plan than the other steps in the PDP process. In looking at the standardized coefficient (beta) for these two steps in the PDP process, it is evident that Reflecting on Evidence and Results of PDP had the greatest unique contribution in predicting TAPDP. The strong influence of this predictor is confirmed by examining the squared part (semipartial) correlations. This measures the magnitude of the unique contributions within the context of the model. Sixteen percent of the variance in TAPDP was uniquely accounted for by Reflecting on Evidence and Results, while 3% was attributable to Describing Strategies/Activities. In combination, the two variables accounted for approximately 40% of the variance in Teachers’ Attitudes toward the Professional Development Plan, which is considered a
large effect. Effect size for multiple regressions can also be judged by looking at $R$ square. As a guideline, $R^2$ values of .02, .13, and .26 correspond to small, medium and large effect sizes (Cohen, 1988, as cited by Yockey, 2008). In looking at the results of the multiple regressions for steps of the PDP progress, the $R^2$ was .41, indicating a very large effect.

Table 16

*Summary of Stepwise Multiple Regression for Steps of the PDP Process Predicting Teachers’ Attitudes toward Professional Development Plans (n = 150)*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$B$</th>
<th>$SE$ $B$</th>
<th>$\beta$</th>
<th>Partial $r$</th>
<th>Squared Semipartial Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflecting on evidence and results of PDP</td>
<td>.70</td>
<td>.07</td>
<td>.62**</td>
<td>.618</td>
<td>.38</td>
</tr>
<tr>
<td><strong>Model 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflecting on evidence and results of PDP</td>
<td>.56</td>
<td>.09</td>
<td>.50**</td>
<td>.457</td>
<td>.16</td>
</tr>
<tr>
<td>Describing strategies/activities for reaching PDP goals</td>
<td>.25</td>
<td>.10</td>
<td>.20*</td>
<td>.207</td>
<td>.03</td>
</tr>
</tbody>
</table>

Note. $R^2 = .38$ for Model 1; $R^2 = .41$ for Model 2

*p < .05  ** p < .01

The findings from the multiple regressions suggest that teachers who perceived reflecting on evidence and results of the PDP as beneficial were more likely to have
positive attitudes toward the Professional Development Plan. Additionally, teachers who believed that describing strategies/activities for reaching PDP goals helped in completing a successful PDP were more likely to have positive attitudes toward the PDP. Conversely, teachers that perceived describing strategies/activities for reaching PDP goals to have little benefit and that reflecting on evidence and results of the PDP was not beneficial were more likely to have negative attitudes toward the PDP.

**Research Question 5**

The fifth research question estimated the difference between the means of two groups (Less PDP Collaboration and More PDP Collaboration) on Teachers’ Attitudes toward the Professional Development Plan (TAPDP). Teachers were grouped according to their response on the following question: To what extent did you collaborate with another educator(s) on your PDP? Teachers that responded *Not at all* and *Very little* were assigned to the Less PDP Collaboration group (*n* = 46). Teachers that responded *Quite a bit* or *A great deal* were assigned to the More PDP Collaboration group (*n* = 75). Teachers that responded *Some* were not included in the analysis (*n* = 29). An independent-samples *t* test was used to determine whether the mean value of TAPDP for one group differed significantly from the mean value of TAPDP for the other group.

Before conducting the *t* test the data were examined for homogeneity of variance by conducting a Levene’s test for equality of variances. The results were nonsignificant which means that the distribution of the TAPDP scores for one group had the same variance as the distribution of TAPDP scores for the other group.
The independent samples $t$ test was significant, $t(119) = 2.83, p < .01$. Teachers in the More PDP Collaboration group ($M = 3.66, SD = 1.31$) on the average had more positive attitudes toward the PDP than teachers in the Less PDP Collaboration group ($M = 2.97, SD = 1.29$). Figure 9 shows the distribution of the scores on TAPDP for the two groups. The effect size or magnitude of the difference in the means was measured by eta squared. A general guideline for interpreting the value of eta squared is that .01 represents a small effect, .06 represents a moderate effect, and .14 represents a large effect. In this research project the eta squared ($\eta^2 = .063$) showed a moderate effect and indicated that 6% of the variance in TAPDP scores was accounted for by whether a teacher was a member of the More PDP Collaboration group or the Less PDP Collaboration group. The Cohen’s $d$ was .53, indicating a medium effect size. The findings from this research question suggest that teachers who collaborated on PDPs were more likely to have positive attitudes toward the PDP.
Figure 9. Distribution of scores on TAPDP for the less PDP collaboration group and the more PDP collaboration group.

Research Question 6

In order to address the sixth research question teachers were grouped according to their response to the following question: To what extent was your PDP informed by your school’s goals for this year? Teachers that responded Not at all and Very little were assigned to the PDP Less Aligned to School Goals group ($n = 54$). Teachers that responded Quite a bit or A great deal were assigned to the PDP More Aligned with
School Goals group \((n = 57)\). Teachers that responded Some were not included in the analysis \((n = 39)\). An independent-samples \(t\) test was used to determine whether the mean value of TAPDP for one group differed significantly from the mean value of TAPDP for the other group.

Before conducting the \(t\) test the data were examined for homogeneity of variance by conducting a Levene’s test for equality of variances. The results were significant which means that the distribution of the TAPDP scores for one group did not have the same variance as the distribution of TAPDP scores for the other group. Therefore a \(t\) statistic assuming non-homogeneity of variance was computed.

The independent samples unequal variance \(t\) test was significant, \(t(104) = 6.03, p < .01\). Teachers in the PDP More Aligned to School Goals group \((M = 3.99, SD = 1.35)\) on the average had more positive attitudes toward the PDP than teachers in the PDP Less Aligned with School Goals group \((M = 2.63, SD = 1.01)\). The magnitude of the difference in means was measured by eta squared and reported as \(\eta^2 = .25\), a very large effect size. This indicated that 25% of the variance in TAPDP scores was accounted for by whether a teacher was a member of the PDP More Aligned to School Goals group or the PDP Less Aligned with School Goals group. A Cohen’s \(d\) of 1.15 also shows a very large effect size.

In addition to the unequal variance \(t\) test, a Mann-Whitney \(U\) test was conducted to corroborate the finding that teachers’ who align PDPs with school goals have more positive attitudes toward the PDP than teachers who conduct PDPs with little or no alignment with school goals. The rationale for employing the non-parametric Mann-
Whitney $U$ test statistic was due to the fact that the distribution of scores in the two groups had unequal variances. Generally when an assumption such as equal variances is not met, a non-parametric test is used. For the Mann-Whitney $U$ test the scores on TAPDP were converted to ranks, ignoring group membership. Then the Mann-Whitney $U$ test evaluated whether the mean ranks for the two groups differed significantly from each other. The results of the test were significant, $z = -5.19, p < .01$. Teachers in the PDP More Aligned to School Goals group had an average rank of 71.40 while teachers in the PDP Less Aligned with School Goals group had an average rank of 39.74. Figure 10 shows the distribution of the scores on TAPDP for the two groups. This analysis, along with the unequal variance $t$ test results suggested that teachers who aligned PDPs with school goals were more likely to have positive attitudes toward the PDP.
Research Question 7

The seventh research question investigated the influence of selected demographic variables on teachers’ attitudes toward the Professional Development Plan. One-way between subjects analysis of variance (ANOVA) was employed to compare the means of two or more independent groups on Teachers’ Attitudes toward the Professional...
Development Plans (TAPDP) scores. The demographic variables examined were: (a) years of teaching in six categories, (b) educator role (classroom or specialist), (c) gender, (d) level of educational attainment, and (e) teaching level (Pre-K/Elementary or Secondary). The results from each of the ANOVAs were nonsignificant and are summarized in Table 17. The findings suggest that years of teaching, educator role, gender, level of educational attainment and teaching level did not influence teachers’ attitudes toward the Professional Development Plan.

### Table 17

**Demographic Variables and TAPDP**

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of Teaching</td>
<td>146</td>
<td>5, 140</td>
<td>.794</td>
<td>.555</td>
</tr>
<tr>
<td>Educator Role</td>
<td>147</td>
<td>1, 145</td>
<td>.002</td>
<td>.966</td>
</tr>
<tr>
<td>Gender</td>
<td>147</td>
<td>1, 145</td>
<td>.134</td>
<td>.715</td>
</tr>
<tr>
<td>Educational Attainment</td>
<td>147</td>
<td>4, 142</td>
<td>1.072</td>
<td>.373</td>
</tr>
<tr>
<td>Teaching Level</td>
<td>144</td>
<td>1, 142</td>
<td>.130</td>
<td>.719</td>
</tr>
</tbody>
</table>

### Additional Findings

In this research project several variables emerged as having a statistically significant influence on teachers’ attitudes toward the Professional Development Plan: (a)
a school culture of professional development, (b) PDP collaboration, (c) PDP alignment with school goals, (d) describing strategies and activities for reaching PDP goals, and (e) reflecting on evidence and results of the PDP. These findings raised an additional question about the interaction among these five variables that show significance. As such, one more analysis was conducted. The researcher employed a Stepwise multiple linear regression to investigate the ability of the combination of these variables to predict teachers’ attitudes toward the Professional Development Plan. A two predictor model emerged as being significant, \( R^2 = .46, \ R^2_{adj} = .45, F(2, 144) = 60.98, p < .01 \), indicating that approximately 45% of the variance in Teachers’ Attitudes toward Professional Development Plans was explained by Reflecting on Evidence and Results \( (\beta = .54, t(146) = 8.29, p < .01) \) and PDP alignment with School Goals \( (\beta = .27, t(146) = 4.22, p < .01) \).

**Summary of Research Findings**

Pearson’s product-moment correlations highlighted the bivariate correlations among the five factors of school culture and TAPDP. Collaborative Leadership, Teacher Collaboration, Professional Development and Unity of Purpose showed positive statistically significant correlations with TAPDP, while Collegial Support did not reach statistical significance. Although there were statistically significant correlations with four of the five factors of school culture and TAPDP, the strength of the associations were weak. Stepwise multiple linear regressions showed that the school culture factor Professional Development was the single School Culture subscale that statistically significantly predicted scores on TAPDP. However, the effect size was small.
Pearson’s product-moment correlations showed positive statistically significant relationships between TAPDP and each of the steps of the PDP process: Writing a Goal Statement, Describing Strategies/Activities for Reaching PDP Goals, Collecting Evidence of Progress on PDP, Reflecting on Evidence and Results of PDP. Each of the steps of the PDP process had either a medium or strong association with TAPDP. Stepwise regressions revealed that Describing Strategies/Activities for Reaching PDP Goals and Reflecting on Evidence and Results of PDP were more likely to influence teachers’ attitudes toward the Professional Development Plan than the other steps in the PDP process. In combination, these two variables had a very large effect on TAPDP.

Data analysis using a t test showed that educators who collaborated on PDPs had more positive attitudes toward the PDP (as measured by TAPDP) than educators who reported little or no collaboration on PDPs. The results indicated a medium effect size for interpreting the magnitude of the difference between the two groups. A very large effect size was found when analyzing the data for PDPs aligned with school goals. In both the unequal variance t test and the Mann-Whitney U test, results demonstrated that teachers who aligned their PDPs with school goals had more positive attitudes toward the PDP than teachers who conducted PDPs with little or no alignment with school goals.

The researcher collected demographic data to discover if teacher attitudes toward the PDP differed for their years of teaching, educator role, gender, educational attainment, and teaching level. Data analysis using one-way ANOVA showed that none of the demographic variables statistically significantly influenced TAPDP.
Finally, all the statistically significant variables that emerged from the previous data analyses were combined into a multiple linear regression to check the model’s ability to predict TAPDP. Two predictors, Reflecting on Evidence and Results of PDP and PDP alignment with School Goals, emerged as being statistically significant and explained 45% of the variance in teachers’ attitudes toward the Professional Development Plan.
5. Conclusion

The purpose of this study was to investigate the influence of school culture, school goals, and teacher collaboration on teachers’ attitudes toward their Professional Development Plans. The Professional Development Plan (PDP) is a specific professional development model situated within the teacher evaluation system being implemented in the Owen Public Schools. This research project also involved collecting data on the various steps of the PDP process and determining which steps had the greatest influence on teachers’ attitudes toward the Professional Development Plan as measured by the TAPDP scale. Data were collected via an online questionnaire to which 154 prekindergarten, elementary, and secondary educators responded.

This chapter begins with a summary of the main findings. Next the findings are discussed in the context of previous research followed by a vignette that illustrates how the findings from this research project could play out in practice. The chapter concludes with implications for practice and recommendations for future research related to the Professional Development Plan.

**Summary of Main Findings**

The teachers who participated in this research project held a range of attitudes from very positive to very negative toward the Professional Development Plan. This study identified relationships and influences that seemed likely to sway teachers toward
more positive or less positive attitudes toward the Professional Development Plan. Significant correlations were found between teachers’ attitudes toward the Professional Development Plan (TAPDP) and four factors of school culture. The factors of school culture (a) Collaborative Leadership, (b) Teacher Collaboration, (c) Professional Development, and (d) Unity of Purpose were shown to be associated with teachers’ attitudes toward the Professional Development Plan, although the relationships were not strong. Only the school culture factor Collegial Support was found not to be associated with teachers’ attitudes toward the Professional Development Plan. The school culture factor Professional Development, which had the strongest correlation with teachers’ attitudes toward the Professional Development Plan, was the only school culture factor that significantly predicted teachers’ attitudes toward the Professional Development Plan. Hence, it seems likely that a school culture that values professional learning will positively influence teachers’ attitudes toward the Professional Development Plan.

Another influence on teachers’ attitudes toward the Professional Development Plan was whether teachers worked collaboratively on PDPs. The data showed a moderate effect size that suggested the variance in TAPDP scores was accounted for by whether teachers collaborated on their PDP or whether they worked alone. Therefore, it is likely that teachers who collaborate on PDPs will possess more positive attitudes toward the Professional Development Plan.

Another influence on teachers’ attitudes toward the Professional Development Plan was whether teachers aligned their PDPs with school goals. The data indicated a very large effect size and highlighted that a very large portion of the variance in TAPDP
scores was accounted for by whether teachers aligned their PDP with a school goal or whether their PDP had little or no alignment with a school goal. Therefore, it is likely that teachers who align their PDPs with their school’s goals will have more positive attitudes toward the Professional Development Plan.

With regard to the steps of the PDP process, each of the four steps correlated positively with teachers’ attitudes toward the Professional Development Plan. The strength of the relationship between TAPDP and Writing a Goal Statement was moderate, while strong relationships were evident for Describing Strategies/Activities for Reaching PDP Goals, Collecting Evidence of Progress on PDP and Reflecting on Evidence and Results of the PDP. Furthermore, when the steps of the PDP process were examined for their combined ability to predict TAPDP, two steps emerged as predictors. The two steps with the most influence on TAPDP were Describing Strategies/Activities for Reaching PDP Goals and Reflecting on Evidence and Results of PDP. The strength of the relationship between these steps and TAPDP was very strong, which suggests that teachers who perceive reflecting on evidence and results of the PDP as beneficial will have more positive attitudes toward the Professional Development Plan. Additionally, teachers who believe that describing strategies/activities for reaching PDP goals helps in completing a successful PDP will have more positive attitudes toward the Professional Development Plan.

Lastly, all of the demographic variables were found to be statistically non-significant for describing differences in TAPDP scores suggesting that years of teaching,
educator role, gender, level of educational attainment and teaching level do not influence teachers’ attitudes toward the Professional Development Plan.

**Discussion**

The Professional Development Plan is a professional development model situated within a teacher evaluation system, and as such, all career teachers are required to participate. The purpose of the PDP is to provide career teachers with the opportunity to direct their professional learning in order to become more skilled educators with the ability to improve student learning. However, as the data highlighted, not every teacher who conducted a PDP found the model an effective vehicle by which to become a more accomplished educator. In the words of one teacher, “I feel the PDP is just busy work and takes me away from my real goal which is instructing the students.” Showing a difference of opinion, another teacher stated, “It [the PDP] has been helpful to me in clarifying my goals. I think it has provided the framework to be a better teacher.” This research project investigated some of the possible influences on teachers’ attitudes toward the Professional Development Plan. The next section of this chapter links the findings from this study with the findings from previous research.

**The Influence of School Culture on Teachers’ Attitudes toward their Professional Development Plans**

This research study found a positive correlation between school culture and teachers’ attitudes toward the Professional Development Plan. In addition, the study found that when teachers perceived their school culture to be one that valued professional development they were more likely to have positive attitudes toward the Professional
These findings support the research conducted by McKay (1998) that focused on professional growth within a teacher evaluation system. McKay found that the school culture created the climate where teachers felt supported to experiment and grow professionally. Similarly, Wagner and Hill (1996) found that the culture of the school had the greatest impact on the effectiveness of the growth-oriented approach within a teacher evaluation system. The findings in the present study are consistent with the findings of McLaughlin and Pfeifer (1988) that highlighted the importance of a school culture that values the teacher evaluation system as a way to grow professionally as a teacher.

Similarly, Maynes, Knight, McIntosh, and Umpleby (1995) concluded that teacher evaluation systems designed to promote professional growth will be found (and can be developed) only in schools with healthy, positive cultures where teachers view themselves as learners and teacher evaluation practices are embedded in the everyday work of the school. Maynes et al. wrote the following:

> Even though evaluation for accountability and evaluation for personal growth were structurally separated in the schools we studied, teachers felt a strong *internal* sense of accountability. This seems to relate to an unspoken, but widely recognized, norm of competence that existed in each of the schools. Teachers experienced this cultural norm as a form of internal professional accountability. They held themselves responsible for achieving the high standards implied by the norms (p. 10).

Saphier and King (1985) stated that if certain norms of the school culture are strong, there will be significant and continuous improvements in instruction. If the norms
are weak, instructional improvements will likely be infrequent and random. Fenwick and Smulders (2001) found that in the schools with strong norms valuing teacher learning, Professional Growth Plans were successfully being implemented. If teachers do not believe that the PDP, as one component of the teacher evaluation system, is a valuable tool for professional learning, it is doubtful the PDP will become a strong cultural norm within the school. Although the PDP is required for career teachers, if the school culture does not send the message that the PDP provides a meaningful path for teacher learning, then the PDP may not be taken seriously. As Sergiovanni (1989) suggested, the shared norms and values of the school culture have more influence than the formal rules of the school. There are rules for the PDP, but they may be followed to varying degrees based on the culture of the school. It is important to create effective learning environments for teachers, and that involves developing cultural norms that encourage learning (Bransford et al., 2000).

To instantiate the point about the influence of school culture in the present study, quotes from three teachers are included here. The first two comments indicated that the teachers appeared to be part of a school culture that did not value the PDP as a mechanism for professional growth. One teacher wrote, “If administration took this seriously, teachers might. It instead is treated backwards as what am I doing that I can write down to be in compliance. It doesn’t spur initiative, but rather spawns paperwork.” Another teacher wrote, “Primarily it is of interest in October and in May when the paperwork is due – doesn’t drive the year.” The next statement illustrates a teacher’s preference for a school culture that places importance on the PDP. “I’ve been at schools
where the principal doesn’t really talk to you about (take very seriously) your PDP, and schools where they do. I much prefer the latter.” As the purpose of the PDP is to provide career teachers with the opportunity to direct their professional learning in order to become more skilled educators with the ability to improve student learning, it is crucial to cultivate a school culture that values the PDP as a productive tool for teacher learning.

The importance of the instructional leader in building this culture is found in the research conducted by Kimball (2002a). Kimball declared that the extent to which principals integrate teacher evaluation systems into their instructional leadership approach will impact teacher perceptions of the systems. The messages principals convey about the value of the Professional Development Plan influence the culture of the school as one that encourages teacher learning through the PDP. A collaborative school culture, which includes a culture that values professional development, has been shown to have a positive impact on schools (Ashton & Webb, 1986; Barth, 2006; Fullan & Hargreaves, 1992; 1990; Little, 1982; Rosenholtz, 1991; Saphier & King, 1985). Principals are encouraged to tap into the strengths of teachers to improve teaching and learning in the school (Mednick, 2003). By working together, a strong professional culture can be cultivated in which teachers continuously collaborate to improve their teaching so as to improve student learning. Within this culture, one way in which teachers collaborate to improve their teaching practice is through the Professional Development Plan.
The Influence of Collaboration on Teachers’ Attitudes toward their Professional Development Plans

An important finding from this current research study was that when teachers collaborated on a PDP they were more likely to have positive attitude towards the PDP. Gwin (2008) presented similar findings from his study investigating teachers’ attitudes toward professional development. He found that teachers believed that working in Professional Learning Teams played a more significant role in impacting teaching and learning in their classrooms than the traditional forms of professional development. Another study that highlighted the importance of collaboration to teacher learning was one conducted by Rosenholtz (1991). Rozenholtz found that schools that were learning-enriched had developed norms of collaboration among teachers, along with shared teaching and learning goals and a shared belief that learning to teach is a lifelong endeavor. Borko (2004) and Smylie (1998) found that teachers collaborating with colleagues on instruction influenced teacher learning and classroom practice positively.

In this current study one comment by an Owen teacher highlighted how collaboration impacted the PDP: “I feel that PDPs that are collaborative in nature are much more beneficial than a solo effort. I have learned much more by working with other professionals than with the plans I have developed on my own.” A comment by another teacher indicated that collaboration may have helped to complete a more successful PDP: “The question I chose this year turned out to not be meaningful or interesting over the course of the entire year. Perhaps more oversight/collaboration with another teacher or administrator could have helped me keep it relevant as each quarter passed.” Leadership 180
within a school, along with a school culture that values teacher learning via collaboration, is apt to encourage teachers to collaborate on PDPs and is likely to promote more positive attitudes toward the Professional Development Plan. Numerous researchers have highlighted the value of collaboration to the successful implementation of teacher Professional Growth Plans and the findings from the present study were consistent with this literature (Audet, 2005; Fenwick, 2001; Jorissen, 2007; Koppich, 2007; Loften et. al., 1997; Peini, 2003; Smith, 2009).

The Influence of School Goals on Teachers’ Attitudes toward their Professional Development Plans

An influential finding in the current research project was that teachers who aligned their PDPs with school goals were more likely to have positive attitudes toward their Professional Development Plans. This finding connects to the numerous researchers who have highlighted the importance of professional development being aligned with school goals (King & Newmann, 2000; Loucks-Horsley, 1995; Sparks & Hirsh, 1997; Guskey, 2000). A study by Garet et al. (2001) found that professional development activities that were connected to teachers’ other learning experiences were likely to provide the greatest opportunity for learning. The following example proposed by the researcher of the present study illustrates the idea of coherence. One of the goals of the school was to improve student reading achievement, especially in the content areas. The science teacher, along with several of her colleagues, designed the PDP to focus on reading strategies in science. This resulted in coherence between the focus of the school and the teacher’s individual learning goal. Throughout the year as school staff meetings
were dedicated to learning about reading strategies across the content areas, the teacher was provided with opportunities to make connections to the PDP. Birman et al., (2000) found that coherence of professional development goals with school policies and other professional development experiences was directly related to increased teacher learning and improved classroom practice. An Owen teacher made the following comment about connecting PDP goals with school goals: “Group and school wide PDPs help as long as they are organized and clear goals and expectations are set. It also helps giving direction for the school or department.”

Although this research project found that teachers who aligned their PDPs with school goals were more likely to have positive attitudes toward their Professional Development Plans, mandating that a PDP goal be in alignment with a school or district goal should be approached with caution. Research has found that tensions exist between setting goals that are of a personal interest to the teacher and setting goals that are related to school or district goals (Audet, 2005; Fenwick & Smulders, 2001; McColskey & Eglson, 1993). One of the beliefs of the PDP in the Owen Public Schools is that the process must assure professional growth. Teachers who are quite skilled in the area being targeted by a school goal may assess that their weakness lies in other areas. Hence, they would prefer to design their PDPs so that they grow professionally in their areas of weakness. This scenario is supported by the following statement from an Owen teacher who would like to set a goal for the PDP based on personal interests:

Because of the increasing workload, many of us have chosen a PDP that incorporates other coursework already required of us by the county. I wish
that I had fewer county requirements so that I could choose a PDP that came out of my own needs as a professional. With everything else that is being asked of us, my own initiatives don’t stand a chance in the competition for my time and attention. I wish they’d let up a bit so I can pursue my own goals that come out of my own experiences and needs in my unique setting.

This teacher’s statement should be considered against the Owen Policy Implementation Procedures for T-Scale Evaluation which state that the PDP is designed with the understanding that teachers have different professional needs and that they change and improve in different ways. The importance to some teachers of choosing their professional development goals were echoed in the following statement by an Owen teacher:

I always feel more interested and invested throughout the PDP process because I get to choose the topic to research. When professional development in-services are provided, there isn’t nearly as much investment into it because the topic is a ‘must do’ instead of ‘interested in improving’…

The Influence of the Steps of the PDP Process on Teachers’ Attitudes toward their Professional Development Plans

The steps of the PDP process that were examined in this research study were: (a) Writing a Goal Statement, (b) Describing Strategies/Activities for Reaching PDP Goals, (c) Collecting Evidence of Progress on PDP, and (d) Reflecting on Evidence and Results
of the PDP. Each of the four steps of the PDP process demonstrated a significant relationship with teachers’ attitudes toward the Professional Development Plan with Reflecting on Evidence and Results of the PDP being the step with the greatest influence on teachers’ attitudes toward the Professional Development Plan. Owen teachers who believed reflecting on the evidence and results of their PDPs was beneficial were also the teachers who were most likely to possess positive attitudes toward the Professional Development Plan. Speck and Knipe (2005) describe reflection as:

…a purposeful strategy for reshaping or adapting our behavior based on new understandings that result from gaining different perspectives of the problem. Repeated use of reflection as a habit of mind enables us to frame our future actions based on learning from experience. Because modern life seems to become more frantic each day, reflection is not something we normally insert into our work schedule. In fact, it is a learned behavior that, for some participants, may have its beginnings in professional development seminars. (p. 116)

Although reflection is listed as the last step in the PDP process, reflective practice ideally takes places throughout the PDP process with goal setting and reflecting on strategies, activities, lessons, and student work throughout the year. Reflective practices such as talking with others, keeping a journal, engaging in action research, along with time and encouragement to reflect on teaching, facilitate teacher learning (Ball, 1996). Lambert (2003) argued that professional practice consists of a dynamic relationship among reflection, inquiry, and dialogue that effectively takes place when educators
collaborate. Lambert referenced an interview in which Richard F. Elmore posited that professional development that is likely to have the biggest impact has a reciprocal relationship between the time one spends trying instructional activities in the classroom and then reflective time outside of classroom to think about the next activity.

The finding in this research project about the importance of reflection connects to the research by Koppich (2004). Koppich found that one of the factors teachers considered most important in developing their Professional Growth Plans was self-reflection on teaching practices. Fenwick (2001) found that when principals encouraged teachers to work in groups on Professional Growth Plans, reflective talk was sustained throughout the year. Peine (2003) also showed the connection between talk and reflection in supporting the Professional Growth Plan process when teachers were encouraged to share brief updates at staff meetings relating to their PGPs. Mid-year meetings, either with the principal or with a group of teachers, increased opportunities for reflection (Danielson, 2008; Fenwick & Smulders, 2001; Kimball, 2002b).

The following comment from an Owen teacher touched on the importance of reflection as part of the PDP process, “While some PDPs are better than others (although I always INTEND to have a good PDP), I am a strong proponent of the process – it is through reflective practice that I get better as a teacher.” The following two teachers perceived the PDP process as forcing them to reflect: “It forces you to go through a process that you might otherwise not consider” and “I think that the requirement of a PDP forces me to think beyond the routine activities/goals I initiate each year to consider
other possibilities.” The following teacher wrote that time over the summer to reflect would benefit the PDP process:

I think that many teachers feel under a lot of pressure to come up with a PDP at the beginning of the year. I think the timeline is off. I think if teachers were required to come up with one at the end of the year (in preparation for the next year) it would have them thinking a lot about it over the summer.

From this comment and from a handful of other comments that were submitted as part of the survey, it appears that many Owen teachers were not aware that a single PDP can span several years.

The first step in the PDP process, and a recurring theme in the Professional Growth Plan research, is goal setting. The Owen teachers who participated in this research project demonstrated a range of responses indicating that writing a goal statement/PDP question helped them develop their PDP not at all to a great deal. The teachers who indicated that writing a goal statement/PDP question helped quite a bit or a great deal in developing their PDPs also were more likely to exhibit positive attitudes toward the PDP. In research by Fenwick and Smulders (2001) it was noted that goal setting encouraged teachers to plan more consciously for their growth and think about what evidence for meeting the goal would entail. It may be that Owen teachers who carefully considered the development of their goal statement became more invested in the PDP. On the flip side, over half of the responses indicated that writing a PDP goal statement helped very little or not at all in developing their PDP. Sagor (2005) pointed
out that when teachers draft goals without meaningful reflection the result is that the
goals have very little meaning nor emotional significance for the teacher. The research
suggests that some Owen teachers need support in setting meaningful goals, as is the case
in the research mentioned next.

One idea that surfaced several times in the literature was that teachers were not
sure how to set goals and how to measure goals as part of the PDP process (Beers, 2009;
Smith, 2009; Sullivan et al., 2002). Saphier (1993) recommended that for goal setting to
be effective training must be provided on how to set realistic and attainable goals. One
Owen teacher commented, “A PDP has to be planned in a way that benefits the students
and the professional development of the teacher.”

For all four of the steps in the PDP process, half of the teachers who participated
in this study indicated that the steps helped them not at all or very little in completing
their Professional Development Plans. These teachers were also the ones who were more
likely to indicate negative attitudes toward the PDP. Research studies on Professional
Growth Plans have shown that many teachers need ongoing support and training in how
to carry out the steps of the PDP process, including setting goals, determining strategies
and activities, deciding on evidence to collect, and learning how to think and write
reflectively (Audet, 2005; Beers, 2009; Fenwick & Smulders, 2001; Jorissen, 2007;
Nolan & Hoover, 2005; Peine, 2008; Saphier, 1993; Smith, 2009; Sullivan et al., 2002).
One reason innovations, such as the PDP, do not endure is because of the lack of follow-
up support (Guskey, 1989). Ritchie (2006) found that for teachers to be successful with a
PDP-like option, teachers need guidance for their professional inquires and support
throughout the process. Ritchie highlighted that one type of support came from time to meet and collaborate with colleagues. Time to participate in the steps of the PDP process was mentioned as a necessary support as shown in the comments from the following Owen teachers:

- “It is rushed, an afterthought, thrown into the numerous other responsibilities both parties involved must attend to. If it is indeed as important as the County makes it out to be, it should be give the time necessary to prepare, reflect and discuss its execution; currently, this is not the case.”

- “I believe the PDP process is beneficial to teachers, but time needs to be built in throughout the year, to evaluate and reflect on the process. I think the process itself should be kept as simple as possible, but time for reflection needs to be a priority.”

- “Very time consuming and not enough guidance about how to develop a PDP that is applicable to daily responsibilities.”

- “Difficult to find the time to devote to PDP with other teacher responsibilities and schoolwide staff development. Should have reviewed my PDP plan and goals midyear.”

Time for the PDP process was a recurring theme in the above statements from Owen teachers. Hargreaves (1994) pointed out that shortage of time repeatedly appeared as one of the main problems in implementing professional development programs. “Scarcity of time makes it difficult to plan more thoroughly, to commit oneself to the
effort of innovation, to get together with colleagues, or to sit back and reflect on one’s purposes and progress” (p. 15).

Another source of support for teachers working through the steps of the PDP process comes from the leadership within the school. Davis, Pool, and Mits-Cash (2000) showed that in-school leadership had an impact on the overall opinions teachers had about the teacher evaluation system designed to promote professional growth. Davis et al. found that while procedures and outline steps are useful, they are not sufficient for enhancing teaching and learning. What made a difference in schools successfully implementing the process was that school leaders worked to develop norms of collaboration, reflective practice and a school culture that valued the process as a mean to improve practice. Saphier (1993) corroborated this idea when he wrote of the importance of the school district’s structures, resources and cultural expectations in supporting teachers and administrators in viewing themselves as constant learners. However, Saphier noted that the structure by itself will not communicate the cultural expectation that all adults in the school grow professionally; it merely provides a pathway for that communication. The communication of the message must come through the words and attitudes of the school leader in face-to-face interactions with the teacher.

The influential role of the principal in supporting teachers through the steps in the Professional Development Plan process has been recorded in numerous research studies (Adams, 1998; Audet, 2005; Colby, 2001; Evans, 1998; Koppich, 2004; Milanowski & Heneman, 2001; Peine, 2003; Robinson, 2009; Sullivan et al., 2002). Adams (1998) wrote, “Supervisors in the process functioned as collaborative and supportive facilitators.
They assisted teachers in defining needs and goals, pacing activities, monitoring progress and evaluating results” (p. 95). Fenwick’s (2001) research showed that principals met with teachers mid-year, as well as at the beginning of the year to discuss Professional Growth Plans. During the year, principals spent considerable time with individual teachers and groups of teachers talking through the PGP process. Most of the principals stressed the importance of celebration at the end of the year as teachers reflected on the learning that took place as a result of the PGP. Additionally, the principals stressed that the PGP process was more important than the actual achievement of the goal.

Fenwick and Smulders (2001) found that all school administrators whom they interviewed emphasized the importance of the strong central office support in the district for implementing the teacher Professional Growth Plans. Also training for administrators in the PGP process appeared to be an important component of successful implementation. Principals in one school district also met at regular intervals to discuss the implementation of Professional Growth Plans (Fenwick, 2004). Colby (2001) stressed that only with clear intent and direction at the district level transcending to leadership at the school level will teacher evaluation systems for professional growth impact teacher professional growth, school improvement, and student learning.

The PDP process in Owen Public Schools is working well for some teachers, as evidenced in the following comment:

I love learning new things to help me reach my students. PDP (in a formal way) motivates me to do this and officially document it. Even without a PDP I would be interested in professional development but I think if I
didn’t have to do one I might drag my feet a bit or be more scattered in my approach to professional growth.

This teacher seemed to appreciate the systematic process to professional development that the steps in the PDP process provide. On the other hand, the PDP process is not working for all teachers as highlighted in the following comment by an Owen teacher:

I am all for reflective practice, but it is so frustrating that it is all about filling in a box, collecting data, making your principal happy. It has nothing to do with the needs of the professional. I think a PDP every five years is a better idea. I took my PDP quite seriously for the last five years. I am so frustrated how many of my colleagues just make stuff up the day before the B form is due, and it is just signed off by the principal who clearly has no time or interest in seeing what we really learned, did etc. As long as we all fill in our little boxes, that is good enough for the principal.

Takes all the intrinsic motivation out of you.

There are at least two types of teachers in these data. In the next section the two types of teachers are presented as two contrasting cases that highlight how the PDP process works and does not work for teachers.

Two Contrasting Cases of PDPs

The following vignette illustrates how the findings from this research project could play out in practice. The characters and schools in the vignette are fictional, although they are based on facts from the research project and the literature. At the beginning of this chapter, two quotes from Owen teachers were shared. These quotes are
the springboard for the characters. The first quote will be assigned to Lynn, “It [the PDP] has been helpful to me in clarifying my goals. I think it has provided the framework to be a better teacher.” The second quote will be assigned to Margie, “I feel the PDP is just busy work and takes me away from my real goal which is instructing the students.” Lynn and Margie are fourth grade teachers working in two different schools. The vignette begins with Lynn.

**The case of Lynn.** As Lynn drives to Berry School for the first day of the teacher work week in late August, she recalls the agenda she received in the mail for the week’s activities. Today the principal, Mr. Jeffery, and the school leadership team will be sharing the district’s Strategic Plan Goals, the Berry School Management Plan Goals, and the focus of professional development for the year. The goals are no surprise to Lynn. Last year many teachers in her school intuitively believed that their students were struggling with reading comprehension, especially inference. This concern was brought up at the Professional Practice school improvement committee meeting, of which Lynn is a member. The concern was corroborated after the lead teachers and Mr. Jeffery analyzed data from several sources. On the state standardized tests the team identified cause and effect, inference, and main idea as areas of weakness across the grade levels. The Professional Practice committee, after consulting with the district instructional specialists, decided to use the text *Strategies That Work: Teaching Comprehension to Enhance Understanding* as the basis for professional development for the upcoming year. Lynn’s thoughts are interrupted as she pulls into the school parking lot and greets her
colleagues. They are excited about the upcoming year and are looking forward to another successful year of learning for their students and for themselves as teachers.

After sharing the schools’ goals and how these goals support the School Management Plan and the District Strategic Plan, the principal invites teachers to talk in small groups about their ideas for Professional Development Plans. Mr. Jeffery encourages teachers to consider how a PDP can advance one of the school’s goals. He also suggests that when applicable to the teacher’s assignment teachers may want to design a PDP that will connect to the professional development targeted for the year. Finally, he recommends that teachers work collaboratively to design and implement a PDP. Lynn gathers with teachers on her fourth grade team. Although they will have over a month to develop their PDP, they draft the following PDP question, “What strategies can I implement in my classroom to increase student achievement in reading comprehension so that at least 90% of my students demonstrate gains of at least five points on the DRA from the beginning to the end of the school year?” Toward the end of the meeting all teachers share the areas they are considering for their PDPs. Mr. Jeffrey ends the meeting by thanking the teachers for their thoughtful work and sharing his belief that the Professional Development Plans are a valuable contribution to school improvement.

Lynn knows from experience that her principal values the PDP and will support teachers throughout the PDP process. Last year Lynn and her colleagues developed a PDP focused on using a variety of assessments in mathematics to inform practice so as to increase student achievement. The team had difficulty setting goals that could be
measured. The principal worked with the team and also referred them to the district Blackboard course that contained resources for the PDP process such as how to set and measure goals, how to determine sources of evidence that demonstrate accomplishment of goals, techniques for reflection, streaming videos that model teachers and principals working on various steps of the PDP process, and a contact list of central office educators who are available to lend assistance on the process and content of PDPs.

Lynn’s principal demonstrated that he takes the PDP seriously during the required fall and spring PDP meetings between the principal and the teacher(s). Mr. Jeffery holds high expectations that his teachers take the PDP seriously as a tool for learning and this message is conveyed clearly in all PDP meetings. Another way the principal demonstrated that he valued the PDP process was that he inquired informally from time about Lynn’s PDP. Lynn perceived that the principal truly wanted to hear how she was growing professionally and how her learning was impacting the students in her class as well as the students in the other classes on her grade level. These informal conversations helped Lynn focus beyond completing an activity to the outcome of the activity. One of the most important resources to teachers is time. Lynn appreciated that Mr. Jeffery and the school leadership team dedicated time to work on PDPs, which demonstrated that the PDP was valued. One staff meeting a month was set aside for PDP work. Teachers worked in groups to reflect on PDP progress. Teachers completing individual PDPs joined other educators with individual PDPs to discuss progress. At the end of each meeting, several teachers were asked to share PDP successes and challenges. For the mid-year school-based professional development early release day teachers worked on
PDPs, reflected in writing and through dialogue, assessed progress on meeting PDP goals and determined next steps. For the last school-based early release day for professional development, a PDP sharing celebration was held. The principal thanked teachers for their efforts to advance the mission, vision, purpose, and goals of the school. Personally, Lynn had witnessed the positive impact her PDP had on her students’ mathematics achievement. Lynn’s PDP contributed to the advancement of one of the school’s goals. Although she encountered some stumbling blocks along the way, ultimately she was successful because of the support she received from her colleagues, including the principal, within a school culture that valued teacher professional learning and the PDP as a tool to create a better learning environment for both students and teachers. Lynn has a positive attitude toward the PDP as a result of these many influences.

The case of Margie. Margie, who teaches at Bland School, does not have a positive attitude toward the PDP. Margie is a hard working teacher and believes that all her students can reach high standards. She believes that the PDP is busy work and takes her away from her real goal which is instructing students. During the teacher work week before the start of school she listens to the principal, Mrs. Jobs, share the results from the state standardized tests. Margie thinks, “I am going to need to work even harder this year to get those scores up.” There is no mention at the meeting of PDPs. As PDPs have been around for some time the principal assumes that her teachers understand the district’s expectations and do not need or want to spend time reviewing this requirement. A few weeks before the PDP Form A is due the principal sends out a reminder email so that no teacher forgets to turn it in. The day before the form is due Margie decides to “do” the
SMART Board for her PDP. She lists activities that she will do in order to teach with the SMART Board. Her anticipated evidence is focused on completion of activities, not the outcomes of the activities. Also, her PDP does not address how her learning will impact her students. The focus is on teaching, not on student learning. Working alone, Margie completes the PDP form, turns it into her principal and checks it off her TO DO list. Although a brief PDP meeting is required between Margie and the principal, Margie knows from past experience that Mrs. Jobs will be satisfied that Margie completed the form on time and will not ask probing questions about the PDP.

Throughout the year Margie rarely hears the word PDP mentioned. Near the end of the year Margie receives an email reminder that the PDP Form B is due and to sign up for an end of the year meeting. Margie has forgotten what her PDP question and goals were for the year. She searches through her files for the form she completed in the fall. She sighs, thinking of the time she has to take away from her valuable planning time to finish Form B. She determines she needs to spend her time preparing for the following day’s lessons, so she decides to complete the form at home that night. Margie has a negative attitude toward the PDP. However, if she worked in Berry School with Lynn, her PDP experience could have played out differently.

Lynn and Margie. Margie could have been encouraged to design her SMART Board PDP to align with one of the school’s goals and the professional development focus for the year. She could have posed the PDP question, “How can I use the SMART Board to increase student achievement in reading comprehension?” She could have worked collaboratively with her teammates to set goals and determine evidence for
meeting goals. At the required meeting with the principal, Margie and her teammates would be held accountable for submitting a high quality PDP. At the monthly staff meetings dedicated to PDPs, Margie and her colleagues could debrief, look at student work, reflect, design formative assessments and discuss how they really know their activities are positively impacting student achievement. In a school culture that values teacher learning and the norm is using the PDP as a potent mechanism for school improvement, over time Margie develops a more positive attitude toward the Professional Development Plan.

The Berry School principal has strived to cultivate a positive learning culture within her school. Mr. Jeffery takes the PDP seriously as a method for teacher professional growth in part due to the district’s vision that the PDP, when implemented effectively and supported sufficiently, increases teacher learning and ultimately enhances student learning. Several of the district administrative meetings focused on how the central office staff can support the school-based learning that the PDP entails. The Berry School principal has seen first hand over the years how the central office staff supports the PDP process. The support is provided with the expectation that principals will implement the PDP process with fidelity within their schools. The superintendent has communicated that the PDP is to be taken seriously by asking principals about the PDPs when he visits the schools, by providing time for principals to talk about the challenges and successes of the PDP process in the administrative meetings, and by asking probing questions of teachers, principals, and central office that focus the results of the PDP on increased student learning.
Incentives and Reciprocal Responsibility

In Chapter 1 the case was made that teaching is a complex act (Borko & Putman, 1997; Bransford, et al., 2005; Cochran-Smith, 2005; Lieberman & Miller, 1999) and that effective teachers must become career-long learners (Fullan, 1993; Sykes, 1999a; Wise, 1996). It was proposed that one model for career-long learning for teachers is the Professional Development Plan. The data from this research project indicated that the PDP was not being implemented with fidelity in the Owen Public Schools with the result being that career-long learning may not be occurring for many of Owen’s teachers. Asking teachers to engage in the work of the PDP requires a strong rationale and incentives. Interestingly, the school’s environment of incentives can reinforce and promote behaviors that support learning such as encouragement and support, time to learn new knowledge and skills, and time to observe others teaching with these skills (Elmore, 1996). Elmore (2002b) has suggested that the most direct incentives are those embedded in the work itself. When teachers are provided with time to work collaboratively and see that the collaboration leads to improved teaching and visible evidence of student learning, they are motivated by the work itself. Research by Kushman (1992) found that teachers were more committed to their schools when they had opportunities to learn together and contribute together as a team. Kushman proposed that “teachers are likely to give their best to schools that give them something in return” (p.40) such as a workplace that is professionally rewarding. The PDP has the potential to provide a professionally rewarding learning experience, but perhaps there is a knowledge gap. Elmore wrote of the knowledge gap as being not such much about knowing what
makes professional development effective, so much as knowing “how to get it rooted in the institutional structure of schools” (p. 11). The PDP did not appear to be rooted in the rituals of the schools and the practices of Owen teachers. Given the complexity of doing a PDP well, one reason the PDP may not be rooted in practice is because teachers and principals are being asked to implement practices they currently do not know how to do.

If more teachers are expected to be successful with the PDP process then they must be supported in the endeavor. Likewise, when teachers are supported during the PDP process they have a responsibility to take the PDP seriously as a vehicle for professional growth. This idea is summed up by Elmore (2002b) in the following statement:

Accountability must be a reciprocal process. For every increment of performance I demand from you, I have an equal responsibility to provide you with the capacity to meet that expectation. Likewise, for every investment you make in my skill and knowledge, I have a reciprocal responsibility to demonstrate some next increment in performance. (p. 5)

Reciprocal accountability also takes place between principals and the central office.

In reflecting on the uneven implementation of the PDP, perhaps it is useful to consider how schools and the school system can reorganize themselves to create conditions where the PDP will be a valuable process for teacher learning and an instrument of instructional improvement for each school and the district. The findings from this research project can serve as a starting point. For example, it is important that structures such as time are in place for teachers to collaborate and reflect on PDP work.
However, structure alone will not determine the quality of a PDP. Teachers and administrators need to know how to do the complex work that a high quality PDP entails so that successful learning experiences for both teachers and students will ensue. How can the organization support this need? Perhaps it would be appropriate to view the PDP not just as a growth experience for an individual teacher, but as a viable way to support the goals of the school. As teachers experience the impact of their collective work to advance the school’s goals, slowly a culture may grow in which the PDP is a valued tradition. The current consensus view of effective professional development is that it is school-based and embedded in the work of the teacher. How can the Owen Public Schools reorganize to maximize school-based teacher learning? In thinking about the role of teacher leaders, principals, instructional specialists, assistant superintendents, and the superintendent in the PDP process, it may be helpful to consider what Elmore (2000b) considers to be the work of leaders. He has shared that the work of administrative leaders should focus on “enhancing the skills and knowledge of the people in the organization, creating a common culture of expectations around the use of those skills and knowledge, holding the various pieces of the organization together in a productive relationship with each other, and holding individuals accountable for their contributions to the collective results” (p. 15). How does the Owen Public Schools ensure that leaders are able to do this work? And how is the PDP an integral part of this work?

**Implications for Practice**

This research study found that when teachers perceived their school as possessing a culture that valued professional development they were more likely to have positive
attitudes toward the Professional Development Plan. When teachers collaborated on PDPs, and connected PDPs to school goals they were likely to exhibit positive attitudes toward the Professional Development Plan. In addition, the research findings indicated that each step of the PDP process demonstrated a correlation with teachers’ attitudes toward the PDP process, with reflection being the most influential. The PDP is designed to be a model for robust learning, but according to this research project only some of Owen Public Schools teachers felt positively about this form of professional development. Based on the results of this study and by examining the literature related to professional development, school culture, differentiated teacher evaluation systems, and teacher Professional Growth Plans, the following implications for practice are proposed:

1. When the PDP was first implemented in the Owen Public Schools the school board, the school district, school administrators, teacher representatives, and the Owen Education Association asserted that the PDP would be a productive model for teacher growth within the Owen teacher evaluation system. Now, ten years later, it is time to ask, “Is the PDP working to advance teacher learning that will ultimately have an impact on our students?” If the answer is no, then it is time to answer the question, “Do we all agree that the PDP does have the potential to advance teacher learning?” If stakeholders do not believe that the PDP is worthwhile, it is doubtful that the PDP will become “the way we do things around here”. If the organization does value the PDP, it is important that this value is communicated throughout the organization. Ongoing training, support, monitoring, and accountability are powerful ways
for the school district to communicate that the PDP is important and valued.

To realize the full potential of the PDP the Owen Public Schools should focus on “enhancing the skills and knowledge of the people in the organization, creating a common culture of expectations around the use of those skills and knowledge, holding the various pieces of the organization together in a productive relationship with each other, and holding individuals accountable for their contributions to the collective results” (Elmore, 2000b, p. 15).

2. Teachers need to be supported throughout the PDP process from learning how to set and measure PDP goals to learning methods of reflecting on practice. The central office staff development director and the teacher evaluation specialist regularly offer training and support on the PDP process, but few teachers attend these off-site opportunities. As the district is skilled at producing high quality DVDs, it is recommended that DVDs be produced that provided training in the various steps of the PDP process. The DVDs would be viewed at each school site as a staff, followed by discussion. The programs could also be available on demand and streamed through Blackboard. Also on the Blackboard site would be examples of PDPs. These PDPs could be designed by the Department of Instruction in areas of reading, writing, mathematics, science, social studies, the arts, and physical education. These example PDPs are not meant to be copied as is by teachers, but more to serve as a model for productive PDPs. The exemplars provide not only a model for the process, but also serve as models for the content of the PDP. The district
teacher evaluation specialist and the director of professional development can support teachers by connecting resources to the content that is being studied by teachers as part of their PDPs. Also they could connect similar PDP groups to one another and ultimately communicate the learning to the larger community. The director of professional development and the teacher evaluation specialist are in the unique position of knowing the type of PDP work taking place across the district. They could communicate how PDPs are advancing the goals of the school district. They could also encourage PDP alignment such that district goals filter down to school and department goals, which filter down to teachers’ PDP goals.

3. At the school level one of the school-based pre-service week professional development sessions should be dedicated to the PDP process. This would provide a first support in setting goals for the PDP. As the Owen Public Schools’ differentiated teacher evaluation system is based on Danielson’s (1996) *Framework for Teaching*, both new and experienced teachers could conduct a self-assessment by comparing their teaching practices to the professional performance standards outlined in the framework. This would generate possible ideas to incorporate into the PDPs. During this PDP kickoff session, the principal and the school leadership team would share the school’s goals that were determined the previous spring based on the district Strategic Plan and with input from the school lead teachers and school improvement committees. Also during the session, teachers would share their areas of
interest for professional growth which may connect to other teachers’ ideas for professional learning and lead to a collaborative PDP. An important part of the session would be to encourage teachers to design a coherent plan that would connect to teachers’ other professional development activities and to school or district goals and be personally meaningful for the teacher.

4. Teachers should be encouraged by their principals to work collaboratively on PDPs. Through collegial dialogue teachers can learn with and from each other as they pursue their PDP question/PDP goal. It also stands to reason that teachers would feel an ongoing accountability to the peer or group of peers to not “drop the ball” on the PDP. Working with a colleague or group on a regular basis would also encourage ongoing reflection, a vital part of the PDP process. As more and more teachers work collaboratively, a more collaborative school culture may grow. Collaborative cultures are not just beneficial for teacher learning; they have also been shown to positively affect student achievement.

5. School-based professional development sessions already take place throughout the year. As principals, lead teachers, and school improvement committees plan the professional development calendar for the year, time should be allocated for teachers to work on their PDPs, to share their PDP progress with colleagues, and to reflect on their learning. Time is an important incentive for teachers to work on PDPs.
6. An innovation, such as the PDP, only takes root when it is firmly entrenched in the school culture as the way we do things around here. Although structures such as training, support, leadership, and information about the PDP process are important, it is the shared norms, shared values and expectations of the school culture that determine whether the PDP will be taken seriously or not. In cultivating a collaborative school culture teachers should be encouraged to celebrate their PDP successes as well as to share the stumbling blocks they encountered. As more teachers talk about the PDP process, the PDP is more likely to earn a valued place among the competing demands on teachers’ time. As the PDP process becomes an integral part of teaching and learning in the school, more teachers may experience success with the PDP process. When teachers go through a successful PDP experience and see how the process impacts themselves as well as their students, they are more likely to develop positive attitudes toward the Professional Development Plan. Over time this positive attitude toward the Professional Development Plan as a valued mechanism for learning becomes a cultural norm of the school which exerts a powerful influence over teachers’ thoughts, feelings, and actions. Educators shape their school’s culture and reciprocally the school’s culture shapes how educators view the practices, such as the PDP, taking place within their school.


**Recommendations for Future Research**

Based on the findings from this research study on Professional Development Plans, as well as reviewing the literature related to Professional Growth Plans, the following are recommended as areas for future research:

1. This research study examined the influences on teachers’ attitudes toward their Professional Development Plans. The study found that some teachers’ had positive attitudes and that these attitudes were influenced by school culture, collaboration, PDP connection with school goals, and each step of the PDP process. However, this study did not examine the impact Professional Development Plans have on student learning. It cannot be assumed that because a teacher has a positive attitude toward the Professional Development Plan that student learning will occur. As the primary reason for teacher professional development is for the purpose of increased student learning, this is a critical aspect to investigate in a future research project.

2. Research has shown that professional development is most meaningful when teachers have a choice and are able to participate in activities that are relevant to their particular needs and context. Although the primary purpose of teacher professional development is student achievement, a secondary aim could be considered teacher engagement, which could lead to less teacher burn-out, increased teacher retention, and commitment to the school. When teachers engage in the PDP process and experience success how does this increase commitment and self-efficacy? As commitment, self-efficacy, and collective
efficacy have been empirically linked to increased student achievement, it would be beneficial to research the relationships between the PDP and these constructs.

3. Most of the research studies conducted on Professional Growth Plans took place within a few years after the PGP was first implemented. When an innovation is first implemented it is usually “front and center” among the competing demands within the school building. As Jorissen (2007) recommended, ongoing monitoring is needed within a differentiated teacher evaluation system. What monitoring has taken place across the country in school systems that have implemented PGPs? How has the PGP process changed since it was first implemented? After participating in the PGP process for at least ten years, what are the perceptions of the teachers and administrators who are using the system?

4. Along the lines of the above recommendation, the research that took place for this study should be repeated in three years after the implications for practice have been addressed. How have teachers’ attitudes toward the Professional Development Plan changed as a result of the targeted support for each step of the PDP process and more teachers working collaboratively and linking their PDP goals with school goals? In what ways does school culture influence teachers’ attitudes toward the PDP?

5. A future research project could take an in-depth look at the Professional Development Plan by following several teachers through the PDP process.
What are the experiences of a teacher who is working on an individual PDP? What are the experiences of a teacher working on a collaborative PDP? What school and district structural supports assist with the PDP process and what barriers did the teachers face? What types of evidence were collected? When and how did reflection take place? How do the teachers make the connection between their learning that resulted from the PDP and the learning of their students? By looking closely at these teachers’ experiences a district may gain insights into how to improve the process so that more teachers will experience a successful PDP growth opportunity. Similarly, an in-depth focus on several administrators navigating the PDP process would be informative.

6. Much of the research noted that teacher evaluation systems can be designed to serve the dual purposes of accountability and professional development. However, many of the research studies seemed to indicate that teachers viewed differentiated teacher evaluation systems more for accountability than for professional growth. If teachers believe the system is for “quality assurance” and the teachers have received positive evaluations in the past, they may feel there is no need to fully participate in the system. In tandem, if an administrator privileges the differentiated teacher evaluation system as a method for accountability more than for professional development, this view may influence how the teachers within the school perceive the system. Although in policy a teacher evaluation system may profess to be a dual system of accountability and professional growth, what happens in practice...
becomes a part of the culture of the way things are done. A research project that examines this perspective would be valuable. In particular, a study that looks at “the culture of evaluation as a pathway for professional development” is a much needed link in the chain of research related to Professional Growth Plans.

7. Currently, the United States Department of Education’s Race to the Top competition is taking place across the United States. One component of the race is designing new systems for teacher evaluation based in part on student academic growth. Will Professional Growth Plans still have a place within the new teacher evaluation systems? How will these new systems affect the manner in which experienced teachers design their Professional Growth Plans? How will the Race to the Top impact a school’s culture for evaluation for the purpose of teacher professional growth? A positive culture for evaluation would cultivate norms of collaboration and professional growth with the intent to become the most effective teacher for the students and advance the goals of the school. However, a negative culture of evaluation may grow norms of fear and possibly lead to less teacher collaboration as teachers compete to show that their students have grown more over the year than students in other classes. Special attention should be paid to the state of Delaware, the first place winner in the first round of the Race to the Top. Delaware’s teacher evaluation system is based on Danielson’s Framework for Teaching. The goal setting process being used in Delaware may be
informative for the goal setting component of the Professional Growth Plan process in other states and districts.
APPENDIX A

Domains, Components, and Elements of the Framework for Teaching

**Domain 1: Planning and Preparation**

Component 1a: Demonstrating knowledge of content and pedagogy
- Knowledge of Content and the Structure of the Discipline
- Knowledge of Prerequisite Relationships
- Knowledge of Content-Related Pedagogy

Component 1b: Demonstrating knowledge of students
- Knowledge of Child and Adolescent Development
- Knowledge of the Learning Process
- Knowledge of Students’ Skills, Knowledge, and Language Proficiency
- Knowledge of Students’ Interests and Cultural Heritage
- Knowledge of Students’ Special Needs

Component 1c: Setting instructional outcomes
- Value, Sequence, and Alignment
- Clarity
- Balance
- Suitability for Diverse Learners

Component 1d: Demonstrating knowledge of resources
- Resources for Classroom Use
- Resources to Extend Content Knowledge and Pedagogy
- Resources for Students

Component 1e: Designing coherent instruction
- Learning Activities
- Instructional Materials and Resources
- Instructional Groups
- Lesson and Unit Structure

Component 1f: Designing student assessments
- Congruence with Instructional Outcomes
- Criteria and Standards
- Design of Formative Assessments

**Domain 2: Classroom Environment**

Component 2a: Creating an environment of respect and rapport
- Teacher Interaction with Students
- Student Interactions with One Another
Component 2b: Establishing a culture for learning
- Importance of the Content
- Expectations for Learning and Achievement
- Student Pride in Work

Component 2c: Managing classroom procedures
- Management of Instructional Groups
- Management of Transitions
- Management of Materials And Supplies
- Performance of Non-Instructional Duties
- Supervision of Volunteers And Paraprofessionals

Component 2d: Managing student behavior
- Expectations
- Monitoring of Student Behavior
- Response to Student Misbehavior

Component 2e: Organizing physical space
- Safety and Accessibility
- Arrangement of Furniture and Use of Physical Resources

Domain 3: Instruction

Component 3a: Communicating with students
- Expectations for Learning
- Directions and Procedures
- Explanations of Content
- Use of Oral and Written Language

Component 3b: Using questioning and discussion techniques
- Quality of Questions
- Discussion Techniques
- Student Participation

Component 3c: Engaging students in learning
- Activities and Assignments
- Grouping of Students
- Instructional Materials and Resources
- Structure and Pacing

Component 3d: Using assessment in instruction
- Assessment Criteria
- Monitoring of Student Learning
- Feedback to Students
- Student Self-Assessment and Monitoring of Progress

Component 3e: Demonstrating flexibility and responsiveness
- Lesson Adjustment
- Response to Students
- Persistence

**Domain 4: Professional Responsibilities**

Component 4a: Reflecting on teaching
- Accuracy
- Use in Future Teaching

Component 4b: Maintaining accurate records
- Student Completion of Assignments
- Student Progress in Learning
- Non-instructional Records

Component 4c: Communicating with families
- Information About the Instructional Program
- Information About Individual Students
- Engagement of Families in the Instructional Program

Component 4d: Participating in a professional community
- Relationships with Colleagues
- Involvement in a Culture of Professional Inquiry
- Service to the School
- Participation in School and District Projects

Component 4e: Growing and developing professionally
- Enhancement of Content Knowledge and Pedagogical Skill
- Receptivity to Feedback from Colleagues
- Service to the Profession

Component 4f: Showing professionalism
- Integrity And Ethical Conduct
- Service To Students
- Advocacy
- Decision Making
The teacher demonstrates knowledge and use of APS curriculum.
- Designs lessons that address the long- and short-range goals and objectives of the curriculum
- Prepares lessons that adhere to best practices for delivery of instruction that is relevant, engaging, and challenging
- Designs lessons that incorporate processes that lead to student learning:
  - Motivation of new content by activating prior knowledge and/or providing background experiences
  - Presentation of content
  - Practice of associated skills and processes
  - Application of skills and processes to real world situations

The teacher demonstrates knowledge of student intellectual, social, and emotional development.
- Creates, selects, and adapts instructional plans and materials to accommodate learner differences that include age groups, learning styles and achievement levels, interests, and cultural background

The teacher demonstrates knowledge of resources.
- Selects instructional materials that are relevant to the instructional content being taught
- Utilizes appropriate staff resources such as reading specialists, library media specialists, counselors, ESOL/HILT teachers, special education teachers, paraprofessionals, Title I teachers, and resource teachers for the gifted.
- Makes use of community resources such as public library, museums, community and volunteer organizations
- Promotes, uses, and incorporates diversity in program development and selection of materials

INSTRUCTION

The teacher delivers instruction that is relevant.
- Connects learning to students present lives
- Guides students in connecting learning to the world beyond school
- Incorporates opportunities for the application of new learning

The teacher delivers instruction that is engaging.
- Creates an interactive learning environment that emphasizes inquiry, discovery, and
problem-solving

- Develops lessons/tasks that address the range of student readiness levels, learning styles, and multiple intelligence
- Uses a multisensory approach for delivery of instruction (e.g. use of manipulative, visuals, and concrete materials)
- Uses technology to facilitate teaching and learning
- Groups and regroups students in a variety of learning situations
- Incorporates a student-centered project approach and provides ample opportunities for the practice of skills and processes
- Uses teaching strategies which emphasize student questioning, justifying, writing, modeling, and observing

The teacher delivers instruction that is challenging.

- Connects new learning to what students already know
- Ensures that all students have access to the full range of the curriculum regardless of past achievement or any other factor
- Makes multidisciplinary connections
- Acts as a guide and facilitator to student learning and promotes a student-centered classroom

The teacher assesses student learning.

- Includes assessment as a regular part of classroom instruction
- Designs assessment that is congruent with instructional goals both in content and in process
- Establishes assessment criteria and communicates those criteria clearly to students
- Establishes with students meaningful criteria and choices for demonstrating their learning
- Promotes student self assessment and peer assessment
- Uses assessment results to inform instruction
- Uses a wide range of assessment tools
- Monitors students learning, both formally and informally
- Observes students in a variety of settings and uses student work samples to monitor and document student progress
- Communicates assessment processes and results to students and to parents and staff as appropriate

CLASSROOM ENVIRONMENT

The teacher creates a safe, supportive, learning environment.

- Promotes positive relationships among students that encourage mutual respect, initiative, positive view of learning, independence, and self confidence
- Demonstrates respect for and sensitivity to the diversity among students and staff

The teacher establishes high expectations.

- Communicates high expectations for all learners regardless of race, gender, ethnicity, language background, or disabilities
- Provides opportunities for students to work in their areas of strength and receive recognition
The teacher effectively manages the classroom.
- Establishes classroom routines (so that time may be used efficiently) to assure optimal student learning
- Establishes and administers a consistent and fair set of conduct standards and expectations
- Elicits students input in the development of conduct standards and consequences
- Assures that all resource staff and volunteers are effectively used to enhance student learning

The teacher maintains a physical environment conducive to learning.
- Uses a variety of physical resources such as print and non-print materials, audiovisual equipment, computer technology, and classroom libraries
- Encourages and cultivates student participation in establishing an effective classroom environment
- Creates a physical environment that stimulates and increases students involvement in the instructional program (i.e. a display of student work)
- Adapts space for different instructional purposes at different times, matched to curricular goals as well as student needs

PROFESSIONAL RESPONSIBILITIES

The teacher grows and develops professionally.
- Participates in professional development activities (i.e. professional organizations, staff development, curriculum projects)
- Keeps current in the field and applies knowledge to instruction

The teacher reflects on teaching.
- Uses goal setting as a means of continuous growth
- Assumes responsibility for student outcomes
- Participates in self-assessment activities
- Monitors own beliefs and behaviors to assure that high expectations are communicated

The teacher communicates with others about the instructional program.
- Communicates with students, maintaining student records, and keeping students apprised of their progress
- Communicates with families and engages families in the instructional program
- Communicates with peers through activities such as Teachers as Readers, Teachers as Researchers, collaborative inquiry, peer coaching, and study teams

The teacher demonstrates professional behavior.
- Serves as appropriate role model to students and peers
- Demonstrates ethical behavior
- Practices a strong work ethic
- Collaborates with colleagues
SOURCES

Guidelines for Student Assessment  
Owen Public Schools, October 1996

Best Practices Document  
Curriculum Supervisors, August 1997

Core Curriculum Characteristics in Common for Teacher Observations  
Owen Public Schools

Curriculum Framework: Social Studies Best Practices  
Owen Public Schools

Enhancing Professional Practice: A Framework for Teaching  
Charlotte Danielson, ASCD, Alexandra, Virginia, 1996

Onward to Excellence Effective Schooling Practices: A Research Synthesis  
Kathleen Cotton, Northwest Regional Educational Laboratory, Portland, Oregon, 1995

Teacher Performance Evaluation Handbook  
Fairfax County Public Schools, 1994
APPENDIX C

OWEN PUBLIC SCHOOLS

PROFESSIONAL DEVELOPMENT PLAN

(to be submitted by October 15)*

<table>
<thead>
<tr>
<th>Teacher's Name:</th>
<th>Employee ID#:</th>
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<tbody>
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</table>

<table>
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<tr>
<th>School:</th>
<th>1-year PDP</th>
<th>Multi-year PDP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

PDP Question:

PDP Options (check all that apply): Detailed explanations of the four options for designing the Professional Development Plan are provided on the back of this form.

- [ ] Teacher Research
- [ ] Collaborative Inquiry
- [ ] Proven Practice
- [ ] Guided Observation

Proposed Strategies/Activities:

Anticipated Evidence:

We have collaborated and agreed on the above Professional Development Plan.

Teacher’s Signature: ____________________________ Date: __________

Evaluator’s Signature: __________________________ Date: __________

Print Evaluator’s Name: __________________________

*Forward one copy to the Professional Development Office.
## Type of PDP

**Teacher Research/Classroom-Based Inquiry.** In teacher research (sometimes referred to as classroom-based inquiry), the teacher will formulate a question. The teacher investigates the question by examining different sources such as seeking expertise of colleagues, reviewing literature on the subject, and checking student records and/or teacher observations. After implementing new strategies and activities, the teacher will collect and evaluate data that could be either qualitative or quantitative. The conclusions may lead to further investigation.

**Proven Practice.** The teacher will implement a curriculum or technique that the teacher has never used. The “proven practice” may be modified to fit his/her own setting, so professional input is also incorporated in this option. The source of the “proven practice” will be documented on Form A. Data gathering may be narrative or reflective and/or qualitative or quantitative in nature.

**Guided Observation.** The teacher will choose and focus on improving an instructional practice, which can be assessed by classroom observations. The Plan will specify that the teacher’s administrator will observe her/him. The teacher will assume greater professional responsibility by targeting a specific area of (Best Instructional Practices). The frequency of observations will be determined by the teacher and administrator collaboratively. Peer coaching would fit into this model. What do I want my evaluator to observe when he/she comes to my classroom?

**Collaborative Inquiry.** A team of teachers will meet regularly to study a common educational interest or concern. The teachers may develop and implement a classroom-based inquiry, or they may decide to incorporate a proven practice and adapt it to the needs of their students. The team will consult resources and implement appropriate strategies and activities. The team will collect and evaluate data. The conclusion may lead to further investigation(s).
APPENDIX D

OWEN PUBLIC SCHOOLS

PROFESSIONAL DEVELOPMENT PLAN

Please refer to the Owen Public Schools Teacher Evaluation Handbook for more information regarding the Professional Development Plan. The teacher and evaluator will sign this form only after Form B is completed.

<table>
<thead>
<tr>
<th>Teacher’s Name:</th>
<th>Employee ID#:</th>
</tr>
</thead>
<tbody>
<tr>
<td>School:</td>
<td>School Year: 2008-2009</td>
</tr>
</tbody>
</table>

PDP Question:

Check all that apply to your Professional Development Plan

- Teacher Research
- Collaborative Inquiry
- Proven Practice
- Guided Observation

Strategies/Activities

Evidence and Results

We have collaborated and agreed on the above

Teacher’s Signature: ___________________________ Date: ___________________________

Evaluator’s Signature: ___________________________ Date: ___________________________

Print Evaluator’s Name: ___________________________

Form B is due at the end of the school year.

CONTINUED ON NEXT PAGE

Teacher Evaluation Handbook

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220
Teacher, ___________________________, meets professional standards in the areas of planning and preparation, classroom environment, delivery of instruction and professional responsibility.

Principal's Signature: ___________________________ Date: ____________

Evaluator's Signature: ___________________________ Date: ____________

Reflection Section for Teacher (required)


Reflection Section for Administrator (required)

Teacher's Signature: ___________________________ Date: ____________
Evaluator's Signature: ___________________________ Date: ____________
Print Evaluator's Name: ___________________________
Principal's Signature: ___________________________ Date: ____________
Print Principal's Name: ___________________________

*Signifies only that the teacher has read this report

Checklist for Documentation

- One copy retained by the teacher
- Principal forwards one copy to Personnel
- Principal forwards one copy to Professional Development Office
APPENDIX E

Informed Consent Approval from George Mason University

INFORMED CONSENT FORM FOR ELECTRONIC SURVEY

Thank you for participating in this research study by completing the online questionnaire. Before you begin, please read the informed consent form below. The George Mason University Human Subjects Review Board has waived the requirement for signing the consent form. However, if you would like to sign a consent form prior to beginning the research, please contact Dr. Gary Galluzzo at (703) 993-2004 at George Mason University.

If you agree to the conditions in the informed consent form below, please click on the button that says I agree to participate in this study.

TITLE OF RESEARCH STUDY - The Influence of School Culture, Collaboration, School Goals, and Selected Teacher Demographic Variables on Teachers' Attitudes about Professional Development Plans

RESEARCH PROCEDURES
This research is being conducted to learn about the relationships among school culture, collaboration, school goals, selected teacher demographic variables and teachers' attitudes about Professional Development Plans (PDP). If you agree to participate, you will be asked to complete an online questionnaire that takes about 10 minutes to complete.

RISKS
There are no foreseeable risks for participating in this research.

BENEFITS
There are no benefits to you as a participant other than the opportunity to share your opinions and contribute to the research in the field of education.

CONFIDENTIALITY
The data in this study will be confidential. While it is understood that no computer transmission can be perfectly secure, reasonable efforts will be made to protect the confidentiality of your transmission. The researcher will not be able to link your name with your answers to the questionnaire.

PARTICIPATION
Your participation is voluntary. If you decide not to participate or if you withdraw from the study, there is no penalty or loss of benefits to which you are otherwise entitled. There are no costs to you or any other party. The last page of the online survey contains directions for entering a drawing for a chance to win one of three $50.00 Target gift cards. If you choose to enter the drawing, you will be prompted to print out the last page of the online survey, fill out the required information and send the form to Laurie Sullivan at through the interschool mail. All entries must be received by Tuesday, June 23rd. The drawing will take place by June 30th, 2009. The principal will draw the three winning entries from all entries received and will be observed during the drawing by researcher Laurie Sullivan.

Revised 07/2005
CONTACT
This research is being conducted by Laurie Sullivan, a doctoral student at George Mason University. She may be reached at (703) 629-6911 for questions or to report a research-related problem. The faculty advisor for this study is Dr. Gary Galluzzo, Dean of the College of Education and Human Development at George Mason University. You may reach Dr. Galluzzo at (703) 993-2004. You may contact the George Mason University Office of Research Subject Protections at 703-993-4121 if you have questions or comments regarding your rights as a participant in the research.

This research has been reviewed according to George Mason University procedures governing your participation in this research.

If you would like to print a copy of the Informed Consent Form, please choose “File” from the browser and select “Print”.

CONSENT
I have read this form and agree to participate in this study.

Click on the button “I agree to participate in this study.”
APPENDIX F

District Newsletter Notice for Participation in Research Project

(School name) teacher and doctoral student Laurie Sullivan asks that teachers who have completed a Professional Development Plan (PDP) for 2008-2009 complete an online survey. For a link to the online survey and a chance to win one of three $50 Target gift cards, email (Sullivan email) before June 19th, 2009.
APPENDIX G

Email to School Principals with Section to Forward to Teachers

Subject: (Principal Name) - Laurie Sullivan, School Name Teacher and GMU Doctoral Student – Please Share Online Survey with Teachers at your School – Chance to win $50 gift cards

Dear ______________ (School Principal),

I am a doctoral student at George Mason University and a teacher at School Name Elementary. I have received approval from Owen Public Schools to conduct a research project in partial fulfillment of my dissertation. I am researching several possible influences on teachers’ attitudes about the Professional Development Plan (PDP).

The Owen Office of Planning and Evaluation has recommended that I ask you, the principal, to share the link to my online questionnaire with the teachers at your school. I know how busy you are at this time of year, so this will be the only communication you receive from me. I appreciate you taking the time to forward this email to the teachers at your school. I will not contact any of your teachers directly about this research project. If you have any questions, please email (Sullivan email address). Or you may contact the Owen Office of Planning and Evaluation at 703-228-6150.

To thank you for your assistance with my research project, I would like to enter your name in the $50 Target Gift Card Drawing for Principals. If you would like to enter, please reply to this email with the words “Gift Card Drawing” or similar in your email. Thank you!

Sincerely,
Laurie Sullivan

Dear Owen Teacher,

I am a doctoral student at George Mason University and a teacher at School Name Elementary. I am researching several possible influences on teachers’ attitudes about the Professional Development Plan (PDP).

If you completed a Professional Development Plan (PDP) for the 2008-2009 school year, I would like to invite you to participate in my research project by completing an online questionnaire. It should take about 10 minutes to complete. Participation is completely voluntary and all data collected will be kept confidential. The researcher will not be able to link your name with your answers to the online questionnaire.

The online survey is available from June 1 to June 19, 2009. At the end of the questionnaire is a form for the drawing to win one of three $50.00 Target gift cards.

Thank you in advance for your help. If you have any questions, you may contact me at (Sullivan email address) or you may contact my advisor, Dr. Gary Galluzzo at (703) 993-2004.

Below is the link to the online survey. You will be asked to read and agree to a Consent Form before beginning the survey.

Sincerely,
Laurie Sullivan

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## APPENDIX H

### SCHOOL CULTURE SURVEY

Form 4-98

To what degree do these statements describe the conditions at your school?

Rate each statement on the following scale:

1=Strongly Disagree  2=Disagree  3=Neutral  4=Agree  5=Strongly Agree

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
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</thead>
<tbody>
<tr>
<td>1. Teachers utilize professional networks to obtain information and</td>
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<td>resources for classroom instruction.</td>
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<td>2. Leaders value teachers' ideas.</td>
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<td>3. Teachers have opportunities for dialogue and planning across</td>
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<td>grades and subjects.</td>
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<td>4. Teachers trust each other.</td>
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<td>5. Teachers support the mission of the school.</td>
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<td>6. Teachers and parents have common expectations for student</td>
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<td>performance.</td>
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<td>7. Leaders in this school trust the professional judgments of</td>
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<td>teachers.</td>
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<td>8. Teachers spend considerable time planning together.</td>
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<td>9. Teachers regularly seek ideas from seminars, colleagues, and</td>
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<td>conferences.</td>
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<td>10. Teachers are willing to help out whenever there is a problem.</td>
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<td>11. Leaders take time to praise teachers that perform well.</td>
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<td>12. The school mission provides a clear sense of direction for teachers.</td>
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<td>13. Parents trust teachers' professional judgments.</td>
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<td>14. Teachers are involved in the decision-making process.</td>
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<td>15. Teachers take time to observe each other teaching.</td>
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<td>16. Professional development is valued by the faculty.</td>
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<td>17. Teachers' ideas are valued by other teachers.</td>
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<td>18. Leaders in our school facilitate teachers working together.</td>
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<td>19. Teachers understand the mission of the school.</td>
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<td>20. Teachers are kept informed on current issues in the school.</td>
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<td>21. Teachers and parents communicate frequently about student performance.</td>
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<td>22. My involvement in policy or decision making is taken seriously.</td>
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<td>23. Teachers are generally aware of what other teachers are teaching.</td>
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<td>24. Teachers maintain a current knowledge base about the learning</td>
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<td>process.</td>
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<td>25. Teachers work cooperatively in groups.</td>
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<td>26. Teachers are rewarded for experimenting with new ideas and</td>
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<td>techniques.</td>
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<td>27. The school mission statement reflects the values of the community.</td>
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<td>28. Leaders support risk-taking and innovation in teaching.</td>
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<td>29. Teachers work together to develop and evaluate programs and</td>
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<td>projects.</td>
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<td>30. The faculty values school improvement.</td>
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<td>31. Teaching performance reflects the mission of the school.</td>
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<td>32. Administrators protect instruction and planning time.</td>
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<td>33. Teaching practice disagreements are voiced openly and discussed.</td>
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<td>34. Teachers are encouraged to share ideas.</td>
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<td>35. Students generally accept responsibility for their schooling, for</td>
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<td>example they engage mentally in class and complete homework</td>
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<td>assignments.</td>
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Developed at Middle Level Leadership Center, University of Missouri by Steve Gruenert & Jerry Valentine. Use by written permission only.

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The following e-mail provides permission to use the School Culture Survey.

From: Laurie J. Sullivan [mailto:sullivan e-mail address]
Sent: Friday, January 02, 2009 2:35 PM
To: Valentine, Jerry W.
Subject: Permission to use the School Culture Survey

Dear Dr. Valentine,

My name is Laurie Sullivan and I am a doctoral student at George Mason University. I talked to you briefly on the phone last year about the School Culture Survey developed by you and Dr. Gruenert. I would like permission to use the SCS in my research this year for my dissertation. I would be more than happy to share my dissertation with you once it is completed.

Thank you for considering my request.

Sincerely, Laurie Sullivan

From: Valentine, Jerry W. [mailto:ValentineJ@missouri.edu]
Sent: Sunday, January 04, 2009 1:16 PM
To: Laurie J. Sullivan
Subject: RE: Permission to use the School Culture Survey

Laurie
You have permission to use the SCS. Contact my assistant at the following email address if you need any additional assistance.
Best of luck with your study. I look forward to seeing the results.

Jerry

My GRA who handles instruments is Catherine. She will be back in the office by mid January.
Catherine O'Brien
O'Brien e-mail address

Jerry Valentine, Ph.D.
Professor, Educational Leadership and Policy Analysis
Director, Middle Level Leadership Center
211 Hill Hall
University of Missouri
Columbia, MO 65211
Work: (573) 882-0944
Fax: (573) 884-7922
Email: ValentineJ@missouri.edu
Web: http://mllc.missouri.edu
APPENDIX I

School Culture Survey Factors, Items, and Reliability

1=Strongly Disagree  2=Disagree  3=Neutral  4=Agree  5=Strongly Agree

**Collaborative Leadership** (Reliability Coefficient: .910 Cronbach's Alpha)
2. Leaders value teachers’ ideas.
7. Leaders in this school trust the professional judgments of teachers.
11. Leaders take time to praise teachers that perform well.
14. Teachers are involved in the decision-making process.
18. Leaders in our school facilitate teachers working together.
20. Teachers are kept informed on current issues in the school.
22. My involvement in policy or decision making is taken seriously.
26. Teachers are rewarded for experimenting with new ideas and techniques.
28. Leaders support risk-taking and innovation in teaching.
32. Administrators protect instruction and planning time.
34. Teachers are encouraged to share ideas.

**Teacher Collaboration** (Reliability Coefficient: .834 Cronbach's Alpha)
3. Teachers have opportunities for dialogue and planning across grades and subjects.
8. Teachers spend considerable time planning together.
15. Teachers take time to observe each other teaching.
23. Teachers are generally aware of what other teachers are teaching.
29. Teachers work together to develop and evaluate programs and projects.
33. Teaching practice disagreements are voiced openly and discussed.

**Professional Development** (Reliability Coefficient: .867 Cronbach's Alpha)
1. Teachers utilize professional networks to obtain information and resources for classroom instruction.
9. Teachers regularly seek ideas from seminars, colleagues, and conferences.
16. Professional development is valued by the faculty.
24. Teachers maintain a current knowledge base about the learning process.
30. The faculty values school improvement.

**Unity of Purpose** (Reliability Coefficient: .821 Cronbach's Alpha)
5. Teachers support the mission of the school.
12. The school mission provides a clear sense of direction for teachers.
19. Teachers understand the mission of the school.
27. The school mission statement reflects the values of the community.
31. Teaching performance reflects the mission of the school.
**Collegial Support** (Reliability Coefficient: .796 Cronbach's Alpha)
4. Teachers trust each other.
10. Teachers are willing to help out whenever there is a problem.
17. Teachers’ ideas are valued by other teachers.
25. Teachers work cooperatively in groups.

**Learning Partnership** (Reliability Coefficient: .658 Cronbach's Alpha)
6. Teachers and parents have common expectations for student performance.
13. Parents trust teachers’ professional judgments.
21. Teachers and parents communicate frequently about student performance.
35. Students generally accept responsibility for their schooling, for example they engage mentally in class and complete homework assignments.
APPENDIX J

Teachers’ Attitudes toward the Professional Development (TAPDP) Scale along with Questions from the Teachers’ Attitudes about Professional Development (TAP) Scale developed by Torff, Sessions, and Byrnes (2005)

Teacher Opinion Questionnaire

Please give your personal opinion about each statement below by circling the appropriate number to the right of each statement. This is an opinion questionnaire – there are no “right” or “wrong” answers.

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<th>Statement</th>
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<tbody>
<tr>
<td>1. Professional development workshops often help teachers</td>
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<td>to develop new teaching techniques</td>
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<td>2. If I did not have to attend inservice workshops, I would not</td>
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<td>3. Professional development events are worth the time they take</td>
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<td>4. I have been enriched by the teacher training events I have attended</td>
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<td>5. Staff development initiatives have NOT had much impact on my teaching</td>
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<td>6. Professional Development Plans (PDP) often help teachers</td>
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<td>to develop new teaching techniques.</td>
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<td>7. If I did not have to do a Professional Development Plan (PDP), I would not.</td>
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<td>8. Professional Development Plans (PDP) are worth the time they take.</td>
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<td>9. I have been enriched by the Professional Development Plan (PDP) I completed this year.</td>
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<td>10. My Professional Development Plan (PDP) this year has NOT had much impact on my teaching.</td>
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The following e-mail provides permission to use the TAP scale including the modifications.

On 3/11/09 2:39 PM, “Laurie J. Sullivan” <sullivan e-mail address> wrote:

Dear Dr. Torff,

Thank you for communicating with me about my dissertation research over the last year. This email is to formally ask you for permission to use the Teachers’ Attitudes about Professional Development instrument developed by you, Dr. Sessions, and Dr. Byrnes. I also plan on using a modified version of your instrument, the Teachers’ Attitudes about the Professional Development Plan:

Teachers’ Attitudes about Professional Development Plans (TAPDP)

Likert six-point scale (1 = strongly agree, 2 = moderately agree, 3 = agree slightly more than disagree, 4 = disagree slightly more than agree, 5 = moderately disagree, and 6 = strongly disagree).

1. Professional Development Plans often help teachers to develop new teaching techniques.
2. If I did not have to do a Professional Development Plan (PDP), I would not*
3. Professional Development Plans (PDP) are worth the time they take.
4. I have been enriched by the PDP I completed this year.
5. My PDP this year has NOT had much impact on my teaching*

*reversed scored

Thanks again for your previous advice on my research project. I would be happy to share my results when I complete my dissertation.

Sincerely,
Laurie Sullivan

Hi
You have my permission, and my best wishes as well. Good luck, and let me know what comes of your work.
Bruce Torff

Bruce Torff, Ed.D.
Professor of Curriculum and Teaching
Director, Doctoral Program in Learning and Teaching

Department of Curriculum and Teaching
School of Education, Health and Human Services
Hofstra University
Hempstead, NY 11549
Phone: (516) 463-5803
Fax: (516) 463-6196
Email: Bruce.Torff@Hofstra.edu

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APPENDIX K

Professional Development Plan Process, School Goals, Collaboration, and Student Learning Survey

Teacher Opinion Questionnaire, Part 2

1 = strongly agree  
2 = moderately agree  
3 = agree slightly more than disagree  
4 = disagree slightly more than agree  
5 = moderately disagree  
6 = strongly disagree

11. To what extent was your PDP informed by your school's goals for this year?

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12. To what extent did you collaborate with another educator(s) on your PDP?

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13. To what extent did writing a goal statement/PDP question help you develop your PDP?

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14. To what extent did describing your strategies/activities for reaching your PDP goals assist you in successfully completing your PDP?

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15. To what extent did collecting evidence of your progress on your PDP assist you in completing your PDP?

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16. To what extent did reflecting on the evidence and results of your PDP impact your growth professionally?

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17. To what extent did your PDP have a positive impact on student learning*? *Not Applicable: Due to the nature of my assignment, my plan was not intended to directly impact student learning (check box here).

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19. Please share anything else about the PDP process you think is important.
APPENDIX L

Teacher Demographics Questions

1. Which PDP option(s) did you choose? Select all that apply.

___ Teacher Researcher ___ Collaborative Inquiry ___ Proven Practice
___ Guided Observation ___ National Board Certification

2. What best describes your teaching position (i.e. Classroom teacher, Music teacher, MIRT, RTG, Exemplary Project Teacher, Librarian, Counselor, Psychologist, etc.)? If your job entails more than one position, please indicate the position(s) that relates to your PDP for the 2008-09 school year.

3. Gender: (check one) ___female ___male

4. Years of teaching completed: (including the 2008-2009 school year) _________

5. Years of teaching completed in Owen Public Schools: (including the 2008-2009 school year) _________

6. Teaching Level: ___ Pre-K ___ Elementary ___ Middle School ___ High School

7. Subject(s) you teach: (check all that apply)

___ elementary education ___ languages other than English
___ math ___ art, music, drama, or dance

___ science ___ health or physical education
___ English ___ business
___ social studies ___ other (please indicate)

8. Educational attainment: (check one)

___ bachelors ___ masters plus 60 credits
___ masters ___ doctorate
___ masters plus 30 credits
APPENDIX M

Email Requesting Teachers to Pilot the Online Questionnaire

Subject: School name Teacher Laurie Sullivan asks for Your Assistance with her Research Project. $25 Target gift card Thank You

Hi ______________,

I am currently working on my dissertation research. I am investigating the possible influences on teachers’ attitudes about Professional Development Plans (PDP). I need a few teachers to pilot the online questionnaire I have created before I disseminate it to Pre-K – 12th grade teachers in June. The survey should take about 10 minutes to complete. I would like to visit you at your school, stay while you take the survey, and then ask you questions about the clarity of the survey and any suggestions you have for improvement. As a small token of appreciation, I would like to give you a $25 Target gift card for assisting me with this research project.

If you are willing to participate, please reply to this email. Thank you!

Sincerely,

Laurie Sullivan
APPENDIX N

Classification of Educators as either Classroom or Specialist

Classroom
- Classroom Elementary
- Pre-K Special Education Teacher
- Special Education Teacher Self-Contained Middle School
- Elective Teacher High School
- HILT (High Intensity Language Training) Classroom Teacher Middle School
- Business Teacher High School
- Classroom Teacher - Special Ed co-teaching with Sciences High School
- Art Teacher High School

Specialist
- Resource Teacher for the Gifted
- Speech/language pathologist
- Language teacher K-4th
- ESOL/HILT teacher--Reading, some writing, Elementary
- Art Teacher Elementary
- Reading Teacher Elementary
- Counselor
- Reading Specialist Middle School
- PE Elementary
- Special Education HS (no mention of self contained)
- Social Worker
- Librarian
- Special Education Teacher Elementary (no mention of classroom or self-contained)
- Math Coach
- Administrator
- Educational Leader
- Reading Specialist High School
- Related Service Provider
- Resource Teacher Elementary
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CURRICULUM VITAE

Laurie J. Sullivan graduated from the University of California at Santa Barbara with a Bachelor of Arts in Liberal Studies in 1986. She earned a California Teaching Credential from USCB in 1987 and was hired to teach a second grade bilingual Spanish and English class in Santa Barbara. In 1993 Sullivan moved to Virginia and was hired to teach fourth grade. In 1996 she accepted a position as a science specialist and currently holds this position. In 2000 Sullivan earned the Certificate of Technology Integration from George Mason University, followed in 2003 with a Masters degree in Advanced Studies in Teaching and Learning.