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Transformative Professional Development Through the Eyes of Jack Mezirow and Thomas Guskey

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The key to improving education is the classroom teacher. Students must have skillful, highly effective teachers who have consistent access to on going professional development. NCLB offers guidelines for effective professional development. States interpret these guidelines and add their own varied legislative requirements. The current result is an eclectic mix of ideas, methods, and approaches. This investigation explored the current professional development literature through the lens of Jack Mezirow's transformational theory of adult learning. Overlaid with theory was Thomas Guskey's model of effective professional development which resulted in a tool for planning and evaluating ongoing teacher education. A survey crafted around Guskey's five levels of professional development was given to 186 elementary classroom teachers in an inner city school district. Qualitative research methods were used to examine the district's current program effectiveness and to inform recommendations for improving its efficacy for all stakeholders. This study confirmed professional development that valued a teacher's personal background, included their present teaching context and focused on real time applications was considered effective by teachers and thus more likely to effect change in their classroom pedagogy. Additionally, it was beneficial when professional development included time for participants to both personally reflect on and to dialog with other colleagues about their learning. This investigation has implications for those involved in the ongoing education of teachers at every level from inception to evaluation.

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TRANSFORMATIVE PROFESSIONAL DEVELOPMENT THROUGH THE EYES OF

JACK MEZIROW AND THOMAS GUSKEY

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Leslie D. Stahl

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The key to improving education is the classroom teacher. Students must have skillful, highly effective teachers who have consistent access to on going professional development. NCLB offers guidelines for effective professional development. States interpret these guidelines and add their own varied legislative requirements. The current result is an eclectic mix of ideas, methods, and approaches. This investigation explored the current professional development literature through the lens of Jack Mezirow's transformational theory of adult learning. Overlaid with theory wasThomas Guskey's model of effective professional development which resulted in a tool for planning and evaluating ongoing teacher education. A survey crafted around Guskey's five levels of professional development was given to 186 elementary classroom teachers in an inner city school district. Qualitative research methods were used to examine the district's current program effectiveness and to inform recommendations for improving its efficacy for all stakeholders. This study confirmed professional development that valued a teacher's personal background, included their present teaching context and focused on real time applications was considered effective by teachers and thus more likely to effect change in their classroom pedagogy. Additionally, it was beneficial when professional development included time for participants to both personally reflect on and to dialog with other colleagues about their learning. This investigation has implications for those involved in the ongoing education of teachers at every level from inception to evaluation.

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To my loving family, I thank you for all you have endured these last years as I pursued my desires. I hope to forever be a support to you as you follow yours.

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Chapter One: Introduction

Every spring across the nation hundreds of school districts outlined professional development expectations and opportunities for teachers to participate in over the summer. In response, multitudes of educators planned their summer vacations accordingly to insure they participated in enough workshops or classes to fulfill their contractual and/or professional obligations. It is a ritual and routine I have been familiar with since I began my teaching career in the early 80's. More than twenty years later, now as an experienced teacher and facilitator of professional development at the building and district level, I still attend district professional development sessions – some are required of me and some are considered optional. Typically, there has been no differentiation in the trainings educators from across the district are offered – at least beyond the initial choice of sessions. Most often we are all together in a large group regardless of the fact that I have twenty-five years of experience, a Master's degree in education, and National Board certification.

As I grew as a professional educator, these sessions became more and more disconnected to my particular needs and teaching context. In truth, I attended professional development sessions in part because I considered myself a life-long learner and consistently sought out ways to improve my craft. But I also attended these training sessions because I, like my colleagues, had to document participation in professional

development opportunities over the course of my career to be eligible to apply for the recertification of my teaching license.

Typically, teachers must have accumulated, over a predetermined period of time, a certain number of credits or points earned by attending classes or other activities in order to renew their teaching license. Colorado, for example, required teachers to earn six credits over a five-year period. These classes, workshops, and conferences were often determined and presented by local school districts in an effort to provide continuous professional development to their employees (Dean & Lauer, 2001; Lauer & Dean, 2005). In theory, the goal of continued education for teachers was much like ongoing training for other professionals – to keep practitioners' knowledge base current and their skills updated (Neville, Sherman & Cohen, 2005; Hayes & Puriefoy, 2004). Effective teachers lie at the crux of almost every educational issue. Thus, teachers, their skills and the current state of education is an oft talked about topic from the marbled halls of the senate chambers in Washington to the messy hallways of American families with children in school.

Significance

Almost everyone had an opinion about education in the United States and how its going - either hopeless and failing, optimistic and improving or somewhere in between. Over the last decade a myriad of reports, studies and articles echoed these sentiments.

There was much evidence that America's schools were still failing to educate all students at a high level.

> Thirty-eight percent of all 4th graders read at the "below basic" level on the
> National Assessment of Educational Progress (Haycock, 2005).

Only sixty-eight percent of students graduated from high school. Just over half of minority students graduated (Swanson 2004).

Nationwide, nearly one in three 9th graders failed to graduate from high school (J. Green & M. Winters, 2005).

In 2003 the high school graduation rates for minority and low-income students were 55% for African-American students and 53% for Hispanic students (J. Green & M. Winters, 2006).

US 8th graders scored near the bottom in the Third International Math and Science Study (TIMSS) placing 18th out of 25 in math and 17th out of 25 in physics (TIMMS, 1999).

US 12th grade students placed 19th out of 21 in math and 16th out of 21 in science (TIMSS, 1999).

Only thirty-two percent of college-bound students were academically prepared for college (Cavanaugh, 2004).

College remedial courses in reading, writing and mathematics were necessary in for at least 30% of entering freshman (A Nation Still At Risk, 1991).

Still other data pointed to reasons for an optimistic outlook as our educational

system seemed to be making meaningful progress in serving all students.

In some states such as Texas and Virginia poor and minority students outperformed their white counterparts (Haycock, 2005).

Students in New York's high poverty and high minority schools performed two full years higher than their peers in Los Angles and Washington, D.C. (Schmoker, 2006).

Fourth-grade students who performed below achievement levels in math were reduced from 39% to 19% since 1996 (Warfield, J., & Kloosterman, P. (2006).

Regardless of which camp spoke the loudest and most convincingly, both sides

agreed the tool for effecting positive change in student achievement was the classroom

teacher.

Rationale

  Teaching is a multi-faceted activity, dynamically fluid and ever changing in complexity. The knowledge and abilities inherent in successful teaching are neither isolated nor static (Hammond & McLaughlin, 1995; Lauer & Dean, 2005). Each year both researchers and practitioners added new knowledge and understandings to the discipline (Snow-Renner & Lauer, 2005). No Child Left Behind (NCLB) acknowledged the integral nature of ongoing professional development that ensured teachers continually possessed the knowledge and skills necessary to successfully perform their duties (Lauer & Dean 2004). In other words, effective teachers were to be continually supported through on-going training opportunities that enabled them to grow and develop as professional educators. Stakeholders such as politicians, superintendents, professors and educators all agreed the purpose and ultimate goal of professional development was to precipitate an increase in student achievement (Dean & Lauer, 2001; Guskey, 2002; Killion, 2002; Neville, Sherman & Cohen, 2005; O'Donnell & Brown, 2004; Sever & Bowgren, 2007; Shaha, et all 2004)

  Effective teachers continued to demonstrated higher student achievement data than their less effective counterparts. Studies revealed a 39 percentage-point difference in student achievement between students with the most and least effective teachers (Marzano, 2003) High student outcomes were significantly correlated with teachers who had earned a teaching certificate as well as degree in the subject area they were teaching. (Darling-Hammond, 1999). Teacher qualification determined by full certification and a major in the field taught was a powerful determinate of student achievement (Darling-Hammond, 1999). Teacher quality was critical to student achievement accounting for 40

to 90 percent of the differences in the test scores of students (Neville, Sherman & Cohen, 2005). Teachers who held teaching certificates consistently produced significantly stronger student achievement results than teachers who did not (Darling- Hammond, 2005).

High quality teachers in elementary school substantially offset or even eliminated the disadvantage of low socio-economic background. Research has continued to show that what teachers know and can do directly affects the quality of teaching – the skill level of a teacher impacts student performance (Sparks & Hirsch, 2000). Colleges of education accredited by the National Council for Accreditation of Teacher Education (NCATE) have produced high quality teachers who in turn help increase student performance (Leibbrand, 2005). Teachers with greater training in the knowledge of teaching methods, learning and child development were more highly effective with students (Darling-Hammond & Berry, 1998).

If the state of K- 12 education in the United States was in need of improvement, either a little or a lot, and the most effective means of bringing about that improvement was in the hands of the classroom teachers, it followed that the initial training and ongoing professional development of teachers was at the crux of the issue. Already multiple organizations and educational entities such as the National Education Association (NEA), the American Education Research Association (AERA), the Council for Higher Education Accreditation (CHEA) and primarily the National Council for Accreditation of Teacher Education (NCATE) focused on and attempted in some way to regulate and hold to rigorous standards the initial training of our nation's teachers. Thus,

this research addressed the ongoing professional development of primary and secondary school teachers after their employment is a U.S. school district.

The Problem

The key to changing education was the classroom teachers, but not just any classroom teacher (Killion & Harrison, 2006). If students were to learn to read and write at more than simply a proficient level, engage successfully in a college preparation program, and persist through high school and on to college, they must have had skillful, highly effective teachers who consistently had access to ongoing professional development (Guskey, 1997; Guskey, 1998; Maldonado, 2002; Sparks & Hirsch, 2000). Therefore, in order to improve education the ongoing professional development educators received once they graduate from the initial teacher training program must be qualitatively sound and ultimately effect student achievement.

There existed much dissatisfaction with existing professional development efforts from policymakers, (Guskey, 2002; Guskey & Sparks, 1996; Hirsch, Koppich & Knapp, 2001: Sparks & Hirsh, 2000;) school districts, (Garet, Birman, Porter, Desimone, Herman & Yoon, 1999; Snow-Renner & Lauer, 2005;) and teachers (Guskey, 1998; Killion, 1999; Sparks & Hirsch, 2002;). This dissatisfaction was tied to the lack of change in teachers' pedagological practices regardless of the many professional development opportunities they were afforded (Darling-Hammond, 1999; Neville, Sherman & Cohen, 2005; Shaha et al, 2004; Sparks & Hirsch, 2000). It seemed in spite of the many trainings, sessions, conferences, workshops and seminars that sought to increase educators' knowledge and skills, the information wasn't making its way into the classroom practices of the participants (Darling-Hammond, 1999; Killion & Harrison, 2006; Shaha et al, 2004;

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Sparks & Hirsh, 2000) To put it another way, teachers were not being significantly altered or affected by their participation in local training sessions. It followed that if they were not changed by or because of their learning then neither was their practice. If their practice wasn't meaningfully different after their professional development experiences then student achievement wasn't affected one way or another. Learning then, must be more about changing teachers' actions, their pedagogy, than about increasing their intellectual knowledge or expanding their present skill base. The existing reality was that school districts across the nation currently spent copious quantities of time and money on the continuing education of the teachers they employed. Fiscal and other resource responsibility, as well as moral obligation, necessitated asking multiple questions regarding the effectiveness of these actions.

Current Context

On the national level NCLB defined quality professional development and each state then subsequently required educators to participate in professional development for renewal of their teacher certificates. But typically the task of providing the actual real time training sessions fell to individual school districts - their plans and personnel. This was true in the local urban district of Dunbar Public Schools.

In the Dunbar Public School system there were two main sources for ongoing educational opportunities for teachers. The first was the Curriculum and Instruction Department. Personnel who specialized in content areas such as math, science, literacy, early childhood education etc… offered classes during the summer months and sporadically throughout the school year. Teachers chose which classes they wanted to attend and could receive either financial compensation and/or ongoing educational credits

accepted by the state's Department of Education for certification renewal. The department of Curriculum and Instruction provided numerous and varied professional development opportunities for teachers.

A second regular source of professional development in DPS was the seven instructional support networks. An assistant superintendent oversaw each of these networks along with a team of instructional specialists. These teams in turn supported their identified schools in numerous ways. One of which was to provide professional development directly to faculty members or to the math/ science or humanities facilitators found in most buildings. These facilitators, supported by their network teams, were then expected to lead much of the ongoing education at their individual school sites. The networks were organized into instructional support teams soon after a new superintendent came in June of 2005, and were in place during this investigation. These networks and the Curriculum and Instruction Department were the two primary sources of professional development in DPS. This organizational system was created to address lofty student achievement goals set down by the district in a comprehensive document aimed at reorganizing and redirecting the district's resources

The document began "Our children will learn from a highly-skilled faculty in every school that is empowered by robust professional development and timely assessment data" (The Denver Plan, 2006). The first draft of this document, written in early 2006, was extensively reviewed and amended by a large group of DPS teachers, administrators, department heads, curriculum personnel and parents. It served as living umbrella document intended to guide both macro and micro decision-making within the district. Embedded within this document was the objective of evaluating the quality and

effectiveness of the district's professional development activities with regard to student outcomes. This study offered a means to accomplish this objective. To do so required navigation through the wide scale lens of national and state professional expectations and then a narrowed focus to local school districts and ultimately to individual teachers. This narrowed focus determined what was effective for teachers at the personal on-on-one level and informed the decisions school districts could make with regards to what professional development was offered, how it was presented or constructed and about what content was covered. Moving through a macro national and state lens, to a micro district and teacher perspective and back out to the district level, painted the professional development landscape in both broad and detailed strokes that informed this project.

Purpose of the Study

The study focused on the current continuing education program of the Dunbar Public School District (DPS) located in the capital city of a western state and the second largest public, urban school district in that state. The following nine questions addressed the evaluation of the professional development system in DPS from multiple levels and perspectives. Taken together, the answers to these questions provided a comprehensive view of the ways and means in which professional development within the district was successful and where it is not.

Research Questions

The primary research questions for this study were as follows:

1. What is the nature of the professional development process in the DPS system?

2. What is the nature of the professional development format in the DPS system?

3.   What is the nature of the professional development content in the DPS system?

4.   What are the attitudes about learning of the participants who identified their professional development as effective?

5.   What are the attitudes about learning of the participants who identified their professional development as ineffective or who were unsure?

6.   Are there differences between teachers who identified their professional development as effective and those who identified it as ineffective or were unsure and their attitudes about learning?

7.   For teachers who identified their professional development as effective what are the relationships between their attitudes about learning and their ideas about

    a.   participation
    b.   learning
    c.   organizational support
    d.   application of leaning
    e.   student achievement

8.   For teachers who identified their professional development as ineffective or were unsure what relationship exists between their attitudes about learning and their ideas about

    a.   participation
    b.   learning
    c.   organizational support
    d.   application of leaning
    e.   student achievement

9.   Are there differences between teachers who identified their professional development as effective and those who identified it as ineffective or were unsure and their attitudes about learning and their attitudes about

    a.   participation
    b.   learning
    c.   organizational support
    d.   application of leaning
    e.   student achievement

These questions guided the inquiry into the effectiveness of the existing

professional development practices in DPS. Local school districts were the place where

change in both practice and paradigm must first begin. To promote change, accurate and

real time data must be collected from individual teachers and then used as a guide for

future decision-making. This small-scale assessment informed the larger professional

development picture at the district level where choices about professional development

were ultimately made. This study was the first step in that process for DPS.

Organizational Overview

This chapter included the introduction, an initial explanation of the

researcher and her background as an elementary teacher and participant in regular

professional development. Statistics regarding the current levels of student success or

lack thereof provided the back drop detailing the significance of quality teachers and the

importance of their on going training. These statistics informed the context of the

problem and the highlighted the rational for investigating teacher professional

development further. The research questions guiding the overall study were also listed in

this chapter.

Chapter two, the literature review, explained the conceptual framework of

Mezirow's theory of transformational learning. The current literature available in the

professional development arena began at the national level with general guidelines and

then moved to the individual states with a plethora of more specific requirements. The

research question guiding the inquiry of this literature was: What are the current national

and state policies surrounding the ongoing professional development of educators? Both

sets of literature, national and state, were viewed through the lens of transformation

learning theory. Chapter two finished by outlining the implications of the current

literature and introduced a means for evaluation that addressed the gaps illuminated in the review.

Chapter three, the methodology chapter, detailed the data collection tool and the specifics of how the data was collected and analyzed and how the research questions were answered statistically.

Chapter four was the presentation of the data collected from all 17 of the sample schools. Descriptive statistic provided a summary of the respondents in regards to gender, ethnicity, age, number of years experience in DPS and in teaching all together. Information regarding the process, format and content of the professional development system in DPS through the eyes of its teachers was detailed. The attitudes about learning for those participants who identified their professional development as effective and those who identified it as ineffective or were unsure was also examined. Additionally, the relationships between these teachers' attitudes about learning and their overall effective or ineffective professional development experiences at five different levels were described.

The final chapter, chapter five, dealt with the study's possible implications – the so what and so why of all the data collected and analyzed from chapter four. This chapter contained the practical applications.. It posited the possible implications for change in the professional development program in DPS. These changes were supported by data that illuminated the strengths and weaknesses of the current professional development system in DPS.

The preceding overview outlined each of the five chapters contained in the entire dissertation. The introduction is completed and the literature review followed.

Chapter Two: Literature Review and Research Questions

The professional development of teachers has been a trendy reform issue and much has been written of late due to its popularity. The subsequent literature review focused on identifying the current happenings in arena of professional development from both a policy and a practice perspective. The research question that guided this inquiry was:

What were the current national and state policies surrounding the ongoing professional development of educators?

Conceptual framework

Of particular importance and relevance to the professional development of teachers was Mezirow's theory of transformational learning. In 1978 Jack Mezirow presented a theory of adult learning based on his extensive observations of adult women returning to formal higher education. His transformational theory of adult learning was particularly focused on education that enabled adults to become autonomous reflective thinkers that critically engaged with their environment (Mezirow, 1997; Taylor, 1997).

The aspect of this theory specifically important to teaching was the point of critically engaging with the environment, which for teachers was the classrooms and the students within them. Mezirow defined transformative learning as "the social process of constructing and appropriating a new or revised interpretations of the meaning of one's experiences as a guide to action" (Mezirow, 1994, p.222-223). Again with regards to the

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professional development of teachers it can be considered effective if what a teacher learns in and through the participation of a professional development was then applied or used as a "guide to action" in their particular teaching context. Three major tenets of this theory applicable to adult learners in professional development settings were; a) the emphasis in learning was about changing how an individual thinks about things rather than changing the amount of knowledge an individual processes (qualitative knowledge rather than quantitative knowledge): b) learning included cognitive, affective, interpersonal and moral aspects that involved a learner's existing knowledge and background as well as their ability to examine their own learning processes (personal context and reflection were important): c) learner's ways' of knowing, their frames of reference, were impacted when individuals were fully engaged in their own learning through reflection and dialogue (meaning constructed through both individual reflection and social interaction further served to guide future behavior). These factors were effective as they interfaced with each other and encouraged learners to build upon, reinterpret and consider the implications and applications of their own current learning experiences and teaching context.

Mezirow's theory also included notions of empowerment and constructivist thinking. Transformational learning encompassed the idea that learners grow and change because of and through educational experiences. Learning acted as a catalyst that promoted individuals toward self and group advocacy and to engage with those around them as self-aware, informed and independent individuals. In other words learning served to empower those who actively participated in the learning process.

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Transformational learning also had a constructivist nature. Learners brought with them their own prior knowledge and previous experiences. Accordingly, they engaged with the new information provided differently because of their background. In this way what was "learned" was distinct for each participant. Each learner took in new data and interwove it through already present personal and intellectual knowledge schemas and arrived at varying nuanced positions. Thus learning was constructed differently for each individual, each time learning opportunities arose (Baumgartner, 2001; Cranton, 1996; Mezirow, 1991).

Transformational learning promoted student engagement in learning, so that thought processes; opinions and behaviors were different - transformed – through and because of educational experiences (Baumgartner, 2001). This theory included the idea that students, including adult students, were not simply acquires of knowledge disseminated by all knowing, expert instructors. Instead, students created meaning through interactions and dialogues with others. Essentially, learners interpreted information through their own background, experiences, knowledge, and current context. Learning developed as individuals struggled to manipulate, reinterpret and revise their current understandings in light of new information. In this way learning was an integration and reevaluation of new knowledge that precipitated a change in behavior or action or in this case a change in a teacher's pedagogy.

With this theory in mind the goal of professional development was to educate teachers in such a way that their thoughts and behaviors, indeed their very classroom practices were changed through and because of their participation in professional

development in ways that promote student achievement. Mezirow's theory had as a central goal to support adults in their own learning so that they ccould critically evaluate how to best engage with their environment for the purpose of effecting change. If the goal of the professional development of teachers was to increase student achievement; then it was imperative the additional training they received beyond their initial certification guide them in continually making effective educational decisions in their classroom. The ongoing education of teachers was deeply embedded in both federal and state legislation. These legislative pieces viewed through the lens of transformational learning provided a critical structure that illuminated both the weaknesses and gaps in the current policies. The overlay of this lens also identified the salient pieces already present in existing legislation and its resulting practice.

Introduction of Literature

The literature surrounding continuing education for teachers was grouped into two categories. The first was that of the factual reports and other information sources concerning the current policy state of professional development. The second group contained literature on the actual implementation and practice of professional development as it unfolded on the state and local level. In the literature review that followed each of these groupings was reviewed in light of three tenets from Mezirow's theory of transformative learning a) in adult training sessions the emphasis should be on qualitative not quantitative learning: b) teachers' individual contexts are extremely important and must be incorporated into professional development sessions: and c) the structure of adult training sessions must include time and opportunities for participants to

both individually reflect and engage in dialog with others in order to facilitate learning and decisions about future behavior. The presence of these characteristics substantially increased the effectiveness of the on-going professional development of teachers as they had the potential to develop teachers' skill and knowledge base both qualitatively and qualitatively. At the same time they connected this improvement to teachers' specific teaching context leading to improved pedagogy and ultimately to increased student achievement. Each of these categories was examined through Mezirow's lens of transformational learning. Before hand however, the larger role the U.S federal government played, specifically in educational policy, was first examined.

No Child Left Behind

The primary federal law affecting education from kindergarten through twelfth grade was the Elementary and Secondary Education Act (ESEA). In 2001 it was reauthorized by the first George Bush and signed into law in 2002 as the No Child Left Behind Act (NCLB). NCLB, without question, wielded the heaviest influence in the current educational arena. With regards to the professional development of all public school teachers NCLB required states to provide "high-quality" professional development that would ensure every teacher was both highly qualified and highly effective – a simple directive with far reaching implications. Embedded in this directive was the federal government's definition of high-quality professional development. According to NCLB "high-quality" included activities that improved and increased teacher's academic knowledge, were part of school and district improvement plans, provided teachers the knowledge to meet state content standards, were sustained,

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intensive and classroom focused, supported the recruiting, hiring and training of high quality teachers, expanded teachers' understandings of effective instructional practices, were built upon scientifically based research practices, and supported increased student achievement. They were not 1-day or short-term workshops or conferences, (NCLB, 2001). The above descriptors were not intended to be a checklist for each and every professional development session but rather a set of weighty guiding principles that loosely outlined the parameters of high quality professional development. It was important to remember these principals were general ideas that were applied later in specific educational contexts. How they fleshed out in real time educational settings, in broad strokes, was included in a subsequent part of this literature review. For now the focus was on examining the influence the NCLB guidelines played in the professional development of teachers. This large-scale contextual understanding was necessary before professional development at state and school districts levels was explored further.

The professional development tenets of NCLB were first viewed through the Mezirow's lens of transformational learning. This lens illuminated both where the strengths and the gaps of these ideas were with regards to the direction they provided to state and local entities as they crafted effective professional development experiences. The first overlay of Mezirow's ideas onto NCLB exposed a gap in the core definition of "high quality" professional development experiences. NCLB language presented a view of learning as merely accumulative in nature - that was something that was continually added to a preexisting knowledge base. Words such as increased, provided, and improved teacher knowledge were riddled through the NCLB document in the section

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that specifically addressed the professional development of teachers. These words

carried with them a shallow understanding of what Mezirow would identify as true

learning – learning that changed an individual and lead to different behavioral

expressions (Mezirow, 1991).

Qualitative changes, in contrast to quantitative changes, required participants to

take in new information, evaluate and interact with it, and to ultimately choose what and

how they would integrate that knowledge into an already existing intellectual and skill

repertoire (Mezirow, 1991). The tendency of education to view knowledge only from a

quantitative perspective – one that amasses knowledge in the form of credit hours and

workshop attendance tallies was inherent in the NCLB guidelines. This perspective

included little about substantive changes in attitude or practice. There is only one

mention of expanding teachers' understandings as opposed to increasing them that was

present in this landmark document. Instead, NCLB presented the view that professional

development was primarily concerned with increasing an individual's knowledge. This

view was at odds with Mezirow and his stance that leaning involved a change in the

learner that promoted autonomous thinking (Mezirow, 1997). It was fundamentally

different from the core idea of transformative learning that believed learners were molded

and shaped and therefore behaved and thought differently because of their participation in

learning/educational experiences.

Secondly, transformative learning embraced and incorporated the specific

contexts of each individual learner (Mezirow, 1991). These contexts included personal

background and prior knowledge, subject matter and grade level taught, years experience

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in teaching as well as education level. Adult learners, concluded Mezirow, bring much to their learning environments (Cranton & King, 2003). Additionally, he contended, what they bring should be both acknowledged and included in any adult learning session. Incorporating learners' intellectual and experiential backgrounds allowed for and promoted an individual's desire and ability to apply new information to their personal context. It was this piece that facilitated what Mezirow identified as true learning. NCLB, for its part, described effective professional development as adult leaning opportunities that were connected to teachers' individual teaching scenarios. NCLB used language describing effective professional development sessions as "part of school" and or "district improvement plans", "classroom focused" and "not 1-day or short-term workshops or conferences."

These descriptors contain verbiage that indicated intentional links to the numerous and varied educational landscapes present in classroom across our nation. According to transformational learning this was a crucial part of adult learning. Its inclusion made the difference between an effective and ineffective professional development session. It is also noteworthy that NCLB required each state to develop and implement a statewide public school accountability system and subsequent state approved district improvement plans (NCLB, 2002). The relationship of professional development to these accountability and school improvement programs highlighted the importance NCLB held in connecting new learning and skills to existing teaching contexts; a bridge foundational in transformative learning theory.

The last piece of Mezirow's theory to overlay on NCLB professional

development expectations was tied to *how* specifically participants learned the content

presented in adult learning sessions that is assumedly connected to their educational

situations. Transformational learning was predicated upon both individual reflection and

social interaction for the construction of meaning. Learners' way of knowing things,

according to Mezirow, were impacted when individuals took time to think deeply about

their own learning (Mezirow, 1994). Personal reflection was a tool learners use to move

knowledge from outside of themselves to inside where it became part of their own

internal make up and behavioral guide. New information presented was considered a

resource that must be incorporated into present ways of thinking through active processes

that included thoughts, feelings, and attitudes (Mezirow, 1998; Mezirow, 1997).

Transformative learning requiresd rigorous participation on the part of the learner. It was

an individual process of creating and integrating new information into a meaningful

behavioral guide. But transformative learning was interactive on a social level as well.

Social interaction, specifically conversation, served as a means by which

individuals processed information, created and refined their own connections and

determined the relevance of and application for new learning. Discourse with others was

a catalyst that helped learners, identify, assess and evaluate their own understandings and

beliefs (Mezirow, 1997). Talking, in other words, was an essential part of adult learning.

Embedding opportunities for adult learners to interact with each other articulating,

defending, questioning, explaining, and justifying their thinking was integral in helping

learning to become transformative.

On the aspects of personal critical reflection and social interaction NCLB was silent. As these two components related more to how sessions were conducted, or process, and not to the learning content or connectedness to local initiatives or teaching contexts, this omission seemed appropriate. However these aspects were included in the review of professional development at the state level.

These guidelines found in the No Child Left Behind legislation and a small and limited source of funds, were the extent of the support provided by the United States federal government. These parameters were given to the states that then interpreted them in both the letter and spirit of the law as they crafted their individual continuing education plans for teachers. As expected, there were numerous and varied approaches and plans created by the states and accordingly a plethora of scholarly material describing their various efforts to legislate professional development.

State Professional Development Legislation and Support

States have taken a variety of approaches to meeting NCLB guidelines in the area of professional development. These approaches included regulatory policies that encompassed the laws and regulations concerned with teacher recertification as well as recommendations and standards, and programmatic policies that included programs, initiatives, activities and organizations (Dean & Lauer, 2001). State policies both directly and indirectly influenced professional development. They furthered NCLB by bringing the legislation one step closer to the people it was intended to impact – teachers and students. Thus most states had their own set of professional development mandates. These mandates were often in the form of recertification requirements, district regulations

regarding the days and or hours required for professional development and the writing or adopting of broad state professional development policies (Hirsch, Koppich, & Knapp, 2001).

Previously mentioned was the common practice of the majority of the states, 35 in 2001, required at least some manner of professional development for teachers seeking to renew their teaching certificates (Education Commission of the States, 2005; Dean & Lauer, 2001). States determined their own qualitative descriptors and quantitative measures. (See table 1). For example, teachers in Arkansas had have 30 clock hours of continuing education or professional development annually in order to renew their teaching certificate for a five-year period. A graduate level three-semester credit class counted as twelve of these hours (ECS, 2005). Colorado required six semester hours of college or university credit or 90 clock hours of professional development over a five-year period (Colorado Department of Education, 2008). Illinois asked for eight semester hours of under graduate or graduate level course work related to education in a five-year period (Illinois Department of Education, 2008). Texas demanded 150 clock hours of approved continuing professional education (CPE), which could be a combination of college classes, workshop attendance, mentoring activities, interactive distance learning, and independent study over a five-year period (Texas Department of Education, 2008).

The state of Idaho required six semester hours, three of which may be earned from Idaho approved district in-services (Idaho Department of Education, 2008). Kansas required graduate degree holders to earn 120 professional development points (PDU's) over a five- year period. While non -graduate degree holders earned 160 PDU's. At least

80 of these PDU's had to have been from college credit (Kansas Department of Education, 2008). The state of Massachusetts required 152.5 professional development points (92.5 in content and 60 in content-based pedagogy) over a five-year period. PDUs can be earned by developing new content seminars for other teachers or new curriculum units officially distributed by the district or clock hours in a district based professional development program (Massachusetts Department of Education, 2008). Table 1 displayed the requirements for certificate renewal in 7 states.

Table 1

State Requirements for teaching certificate renewal

State	Clock hour	College credit	Other
Arkansas	30 hours annually	3 semester credits = 12 hours	
Colorado	90 clock hours OR	6 semester credits	
Illinois		8 semester credits	
Texas	150 clock hours	Can be used as part of the 150 hours	
Idaho		6 semester credits	
Kansas			120 to160 PDU points
Massachusetts			152.5 PDU points

Clearly, there was no uniform requirement of what constitutes professional development, clock hours, college credit, workshops, seminars, curriculum writing etc…or how much was needed for teacher recertification six or eight semester credits or 30 or 150 or 152.5 clock hours. But more crucial to this issue was the lack of directives or guidance regarding the content of these hours, credits or other experiences. Only a few

states attempted to influence, sometimes indirectly, the nature of what was taught in professional development sessions by tying it either to school and district improvement goals or to other specific content requirements.

Colorado, in accordance with their accreditation process, required districts to create professional development plans tied to improvement goals such as increased performance on state assessments or adequate yearly progress. Kansas asked individual teachers to craft their own professional development plans connected to the specific school and district improvement plans in which they taught. Wyoming, took this approach one step further. Wyoming required the professional development plans of school districts to meet a proficient level on a state accreditation rubric. This rubric included the use of research-based strategies proven to increase student performance and promote teachers' knowledge and use of standards based education and assessment practices in professional development activities (Dean & Lauer, 2001). In Wyoming's case these parameters encouraged teachers to make professional development connections to their individual teaching contexts and apply their learning to the students they worked with on a daily basis. Still other states had clear requirements on specific classes or kinds of classes' teachers in their states must take.

The state of Connecticut, for example, took a different approach requiring teachers with early childhood through third grade certificates to take at least 15 hours of reading, reading readiness, reading assessment, reading methods, phonics and structure of the English language over a five-year period (ECS, 2005). Teachers in Idaho with teaching certificates kindergarten through eight grade were expected to take a specific

three credit state approved reading instruction course called "Idaho Comprehensive Literacy Course" before they could apply for recertification (ECE, 2005). For licensure renewal in Louisiana teachers could voluntarily craft a five-year personal professional development plan based on their own interests and career path. Teachers who chose not to participate in this program would be paid according to the minimum salary schedule. Thus it was financially beneficial for teachers in Louisiana to actively participate in their own professional development. For recertification in Maryland teachers were expected to design an individual professional development plan that was agreed to and signed by the local superintendent every five years (ECE, 2005).

Recertification requirements were but one-way states influenced the ongoing professional development of teachers. All teachers over the course of their career must renew their credentials - typically multiple times. Thus the training and renewal expectations required by the individual states have the potential to impact teachers, improve their pedagogy and ultimately increase student achievement. But many states have also crafted legislation regulating the number of hours or days school districts must provide professional development to the teachers they employ.

Statewide legislation regarding mandated time for professional development ran the gamut on a continuum from minimalistic and vague to explicit and rigorous. According to a report by Education of the States (ECS) issued in December of 2005, seventeen states had some manner of or in some way or another addressed statewide policy(s) concerning required school district professional development days and or hours. These states are Arkansas, Colorado, Connecticut, Idaho, Illinois, Kentucky, Louisiana,

Maine, Michigan, Mississippi, Nebraska, Nevada, New Hampshire, South Carolina, Vermont, West Virginia and Wyoming. Florida and Georgia are not listed in the ECS's document, but they too have professional development day requirements. See table #2.

The state of Nebraska's school districts necessitated ten hours of professional development annually (Dean & Lauer, 2001). Michigan required its school districts provide new teachers with fifteen days of professional development over a three-year period. Additionally they required each district to include at least five days of quality professional development for all teachers over the course of an academic year. New teachers must meet both conditions, fifteen days over three years as well as the additional five days every year. South Carolina mandated 180 days of their school calendar be used for student instruction and the balance, anywhere from thirteen to fifteen days, spent on the professional development of teachers. Seven to nine of these days were ear marked for colleagueal professional development that was based upon national professional development standards (ECS, 2005). In West Virginia teachers spend 180 days of their year in direct student instruction, five days over the course of the year in professional development activities with three of these days legislated scheduled before the first day of school (ECS, 2005). Teachers in Arkansas whose teaching certificate expired in 2006 were obligated to accrue 60 hours of professional development annually in order to renew their teaching license. Starting in 2007 the number of hours was raised to 120 hours. Thus currently in Arkansas teachers who must renew an expired license, starting in 2007, were part of a ongoing professional development system that required them to participate, every year in 120 hours for the renewal of their teaching certificate (Arkansas

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Department of Education, 2008). Florida specified the sixteen-day surplus between the

teachers' work contract of 196 days and the student attendance requirement of 180 days

be spent in professional development. Georgia requirds ten days (Ward, St. John, &

Lanie, 1999). Table 2 displayed the professional development time required of seven

states.

Table 2

State required professional development time

State	Time required
Nebraska	10 hours annually
Michigan	15 days for new teachers over 3 years PLUS
	5 days annually for all other teachers
South Carolina	13-15 days annually
West Virginia	5 days annually
Arkansas	120 hours annually
Florida	16 days annually
Georgia	10 days annually

These states as well as numerous others tried to legislate time for professional

development, insuring it had a place in every school district within their state. Sometimes

in conjunction with these laws and sometimes in their absence states have also adopted or

crafted their own professional development non-legislative policies, standards and or

guidelines.

In many states other non-legislative guidelines, standards and other suggested

principles have been created as a means to influence the contexts, processes and content

of both optional and mandated professional development offerings. One of the paths

states have taken to this end is formed strategic partnerships with ancillary education

organizations in their area both nationally and locally. The National Staff Development

Council (NSDC) was one organization many states have turned to for guidance and

direction. NSDC began in 1992. They claimed to be the largest professional association

committed to ensuring success for all students primarily through staff development

(NSDC, 2008a). According to the NSDC, 35 states had some degree of affiliation with

the staff development council. Ten states created Staff Development Leadership Councils

that advocated the use of outstanding professional development practices. The NSDC

aided these councils by providing information and support on the best professional

development practices that lead to higher teacher quality and increased student

achievement. The states involved in this initiative were: California, Colorado, Illinois,

Indiana, Kansas, Louisiana, Maryland, Missouri, New York and Texas (NSDC, 2008b).

State affiliations sometimes included the adoption of standards for professional

development first crafted by the council in 1995 and revised in 2001 (National Staff

Development Council, 2001). These twelve standards were clustered under the three

main headings of context, process and content (Appendix A). Delaware, Kansas and

Maryland aligned their state standards through legislation to the NSDC's professional

development standards. These states expected local school districts to use these

standards as a guide in designing and evaluating the content and processes involved in

high quality staff and professional development (ECS, 2005).

Other states such as Arkansas, Colorado, Florida, Maryland, Minnesota, Connecticut, Illinois, Indiana New Mexico, New York, and Texas had not embraced the standards from a legislative position. However, these states clearly promoted their affiliation with the NSDC and its influence on professional development (NSDC, 2008). Indiana, Kansas, Mississippi, North Carolina, New Jersey and Utah also crafted professional development guidelines for their local school districts to refer to as they design professional development for the educators in their states. Overwhelmingly the guidelines in these states also contained language that provided guidance regarding the contexts, processes and content of professional development experiences (Indiana Department of Education, 2008; New Jersey Department of Education, 2008; Mississippi Department of Education; North Carolina General Assembly, 2008; Kansas Department of Education, 2008; Utah Department of Education, 2008).

For example, Indiana required its school districts to provide professional development opportunities for teachers that were school based, collaboratively designed, job embedded, and aligned with state curriculum and assessment standards. Further more the state encouraged the techniques of inquiry, reflection and networking in these professional development activities (ECS, 2005). New Jersey expected each school district to submit a comprehensive equity plan. This plan included systematic ongoing professional development that emphasized teachers' knowledge, skills and attitudes developed through a "competency-promoting processes." Examples sited as a "competency-promoting process" were study groups, peer coaching and any other opportunities that promoted discussions between colleagues (ECS, 2005).

An additional professional development resource available to the states was the regional educational laboratory program. It consisted of ten regional education service centers that provided professional development opportunities to designated states. The Mid-continent Regional Education Laboratory (McREL), for example, served Colorado, North and South Dakota, Kansas, Missouri, Nebraska and Wyoming. Nine other laboratories divided up the rest of the nation into smaller, geographically close units (Appendix B). Various states have turned to these organizations as well as others that have been created for support in the ongoing professional development of teachers.

Arizona had Regional Training Centers (RTCs) expected to disseminate information from the state department of education to its teachers and administrators. Minnesota established 10 service cooperatives whose purpose - among others was staff development. Utah had four Regional Service Centers. Vermont had five regional Teacher Quality Networks. In West Virginia the legislature created multi county regional education service agencies. Ohio, under its Ohio Regional Education Delivery System (OREDS) had 12 centers spread across the state expected to help local districts with high quality professional development (ECS, 2005). The existence of these ancillary organizations, exemplified an awareness of and commitment to ongoing teacher education. But the specific connection these organizations had with local school districts across their areas was the crux of the issue.

Illinois, Iowa, California, Florida, Georgia, Idaho, Missouri, New York, Oregon, Rhode Island and Iowa required intermediate service agencies to craft professional development plans for continuing teacher education (Ward, St. John & Laine, 1999). The

state of Missouri required districts to have annual professional development plans

supported through its Regional Professional Development Centers. Texas and Organ also

used intermediate agencies in partnership with local school districts to develop and

implement plans for ongoing teacher education (Ward, St. John & Laine, 1999; ECS,

2005). Clearly many states were using these organizations in a vital role for the

professional development of teachers.

The effectiveness of this relationship, as well as the states recertification

requirements, professional development time allotments and expectations for its use, and

the affiliation or lack thereof with national staff development organizations were the tools

states have available to them for creating, guiding, and monitoring ongoing teacher

education. The examples cited above were by no means exhaustive. However, they

illustrated the existing range of current state involved legislation, directives, programs

and affiliations. The presence of these varied approaches exerting influence on

professional development supported the idea that this topic had value in the eyes of both

legislators and educators. But their existence must also be linked to effectiveness if they

were to be credited with equivalent worth. In other words these measures must be

evaluated and their effectiveness determined. The theory of transformational learning

offered a lens through which this can be done. The overall impact of these resources was

best analyzed by returning to Mezirow and the tenets of transformational learning theory.

The first tool in the states' arsenal was that of the legislative requirements

regarding teacher recertification. These legal conditions were far-reaching and all

encompassing. Every teacher whose career spaned more than the length of their original

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teaching license must engage with the state on the states' legal recertification terms. The question was how effective are the individual states in wielding this potentially very powerful tool?

The literature demonstrated the majority of states had quantitative descriptors on recertification requirements. States specifed clock hours, semester or quarter credits or a certain number of professional development units (PDU's) per year or years for educators involved in the recertification process. Assuming good intentions on the part of these qualitative limits was predicated upon the notion that learning could be measured by seat time. Phrased another way this assured the fact that teachers who spend time in learning situations means they are actually learning. A count of the hours or classes or workshops an individual participates in presumed that this time precipitated an equivalent amount of learning that could be measured. Thus, goes the argument, time spent was a good gage of the acquired learning.

However, past and present investigations into exactly what was involved in learning and adult learning specifically, have repeatedly shown that at the very least - learning requires more than just being physically present in a classroom or other educational situation (Hirsch, 2005; Guskey, 2003; Sparks 2003). Marcia L. Tate in her 2004 book "Sit and Get" Won't Grow Dendrites eloquently made a case that participation in professional development for teachers was very different from simply sitting passively and amassing a predetermined number of hours. Indeed this notion was part of why teachers themselves expressed dissatisfaction in their professional development experiences (Sparks & Hirsch, 2002; Guskey, 1998; Killion, 1999). In fact, teachers as

well as school districts and policy makers all acknowledged that professional

development, in order to be effective, must be more than just counting hours (Darling-

Hammond, 1999, Killion & Harrison, 2006; Shaha et al, 2004; Sparks & Hirsh, 2000).

Transformative learning offered a conceptual and practical framework that illuminated

the connections that needed to be formed between the existing state policies and the goal

of effective professional development.

Mezirow and the theory of transformational learning defined learning differently

from the quantitative measures found in most state recertification laws. Learning

according to Mezirow, was not about collecting, numerically or otherwise, knowledge

and skills. Learning was about qualitative change in actions and interactions (Mezirow,

1997; Grabove, 1997). Learning was the substantive changes that occurred because of

new knowledge or skills. It was not merely the quantitative gain that was significant.

Learning, according to Mezirow, was evidenced in the attitude and behavior that was

influenced because of this acquisition. Behavioral change was the crux of

transformational learning. But Mezirow's theory also understood that adult learners

especially, often have short-term, more practical learning goals. Examples included

learning more about the newly rewritten IDEA law and how it will effect special

education identification – a very concrete and identifiable goal.

Short-term learning goals Mezirow called instrumental learning and were a part of

learning that could be more easily quantified. As the measuring of these concrete tasks is

relatively easy to do, members of the educational community often adopted these isolated

items as demonstration of learning. Adults could quickly determine if they have gained

more intellectual knowledge after participating in a workshop or seminar. Self- reporting was a convenient and simple tool often used for this purpose. See appendix C for an example of typical self-reporting evaluation tool. This sample was an exit survey in which teachers were asked to identify their current level of understanding of the material before and after the presentation. Growth, defined as an increase in knowledge, was easily documented in this context. Thus, in this conceptual one-dimensional understanding of learning – learning had occurred. But educators could now understand learning was more than collecting knowledge. Learning was to effect actions and guide behavior. This aspect of learning needed to be able to be communicated and demonstrated.

According to transformational learning theory adult educators had the responsibility to recognize these concrete-learning objectives and to help the learner incorporate that knowledge further into the nuances and decisions involved in their daily practice (Mezirow, 1997). State recertification laws, at their best, focused on only the former part of learning by narrowly defining it with quantifying descriptors. They emphasized instrumental learning losing sight of the overall goal of professional development – a change in teacher pedagogy resulting in improved student achievement. (Hammond & McLaughlin, 1995; Lauer & Dean, 2005; Sparks, 2004a; Sparks, 2004). Accumulated credit hours and amassed seat time was not equivalent to learning and thus a poor measure of quality professional development. Recertification credits fell short in understanding what learning truly was. A further shortcoming was the failure to

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recognize inherent worth in and to build on the knowledge and skills adult learners brought to their learning situations as well as their individual teaching context.

Transformative learning theory valued individuals' background knowledge and promoted new learning applications to real time settings. Phrased simplistically, this meant that what teachers came with (their knowledge and attitudes) and where they were taking it back to (specific schools, classrooms and grade levels) was of extreme importance (Mezirow, 1991; Mezirow, 1994; Mezirow, 1997; Cranton & King, 2003). Appropriately then, the content, context and process of adult learning situations or in this case professional development sessions should be intertwined on a very personal level for every teacher.

Encouraging learners to bring their intellectual and experiential backgrounds to their learning allowed for and promoted an individual's desire and ability to apply new information to their personal context. It is this piece that facilitated what Mezirow identified as true learning. Requiring a predetermined number of credits, clock hours or workshop attendance for licensure recertification was fundamentally different from involving teachers in transformational experience that would improve their teaching. There was no doubt that this was the intended goal of state requirements. But that it fell far short of accomplishing that task became apparent when overlaid by the tenants of transformation theory. There were a few states, however, which had attempted to ameliorate this weakness in one of two ways. These states either insisted recertification requirements to be embedded in district or individual professional development plans or had delineated specific subject matter as part of the recertification requirements.

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The states of Colorado, Kansas, and Wyoming expected school districts to craft professional development programs for their employees that were designed to meet specifically stated improvement goals. These goals could be used to link professional development with an important facet of Mezirow's learning theory. A major tenet in transformational learning previously identified and crucial to adult learning was the inclusion of learners' existing knowledge and personal background. Adults came to professional development with a good deal of prior knowledge, both academic and experiential, as well as their specific teaching context in mind. If this knowledge base and the setting to which new learning will be applied could be incorporated into professional development opportunities; it was more likely that learning, beyond the acquisition of knowledge, would happen. This specific tool could serve to increase the effectiveness of professional development. It is one-way states could augment the mere requirement approach to recertification requirements. A second potential means for improving recertification requirements was the delineation of explicit subject matter.

The states of Connecticut, and Idaho, for example, had identified specific content related classes as required for license recertification. This approach potentially contained several possible connections that could strengthen its effectiveness. The first was the requirement that all teachers in the state take a specific class or set of classes. A common experience with common presentation material could be a catalyst for communication between teachers. Talk, dialog with others, according to Mezirow, helped individuals process and reflect on their learning. Communication could and often does serve as a catalyst for moving learning from simple acquisition of knowledge to integration into an

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individual's ways of thinking that in turn guides their behavior choices (Mezirow, 1994; Mezirow, 1997). Thus all teachers in states with common content related recertification requirements had opportunities to discuss their learning with fellow colleagues. This discussion in turn promoted potential application(s). When learning affected teacher's behavior in the classroom with students, it truly could be considered growth and development.

Another strength this requirement likely offered is also tied to the application piece of learning - but on a larger school and district wide scale. These states had obviously decided for whatever reason or reasons to legislate specific content requirements. Thus all school districts, all school administrators, all schools and eventually all teachers would participate - which could mean two things. This content would be expected to be present in various forms in every teachers' practice, thus this state could have correlating curriculum and teacher evaluation pieces. If the state had specific expectations of its teachers in what and how to teach literacy, as in Idaho's case, their curriculum should support these expectations. Embedded curriculum support and teaching opportunities for educators to use the knowledge presented to them previously could catalyze head knowledge into behavioral action.

Concurrently, if the teacher evaluation system in the state was set up to reward these specific behaviors, then teachers had an added incentive to try new teaching methods and approaches. Phrased a different way, if the curriculum required different pedagogical approaches and the teacher evaluation system expected to document these approaches, learning transmuted into action was a logical outcome. Mezirow's theory of

transformative learning held that learners specific backgrounds both intellectually and in this case professionally had significant effects on participants' capacity and willingness to learn. If teachers knew their state, school and specific administrator expected them to demonstrate the knowledge they were receiving in their classroom practice, they would look for ways to connect their learning to their specific education context. Making these connections required personal reflection and personal reflection, contended Mezirow, was necessary for learning.

These two tenets, assumed present in state recertification content requirements, could strengthen the effectiveness of professional development in these states because transformation learning is predicated upon both individual reflection and social interaction for the construction of meaning. Learners and their ways of knowing are impacted when individuals take time to think deeply (reflect) about their own learning and where and how it can be integrated into their personal and professional behavioral guide (Mezirow, 1994). Additionally, discourse with others served as a catalyst that helped learners, identify, assess and evaluate their own understandings and beliefs. Talking about common experiences with others encouraged transformative learning (Mezirow, 1994). These two significant pieces could be the positive consequences of recertification requirements that included specific content classes. They were part of a second avenue the states could use to achieve the goal of effective professional development. This specific tool had the potential to help teachers connect their learning to their teaching and to increase the effectiveness of merely requiring a certain number of hours, classes or professional development units.

In addition to recertification requirements numerous states also had legislation on their books pertaining to the number of days and or hours school districts must offer professional development. This was another means states had in their effort to promote high quality professional development among their school districts and teachers.

In an attempt to insure professional development was a regular and ongoing part of educational life in their school districts many states had a required number of professional development days. In the states reviewed here, the range ran from ten hours annually in Nebraska to 16 days annually in Florida, with the rest of the states falling somewhere in between. As with the quantified measures found in recertification legislation, required professional development days had the same shortcomings. Learning was not measured in seat time hours or days. Thus these well-intended requirements may not have had the anticipated outcomes. In the 19 states reviewed here no state had specific requirements as to how the hours were used in relation to content, context or process. The days and hours were legislated into existence but no further delineation of their use was provided (Hirsh, 2001). The key to effecting teacher practice and increasing student achievement was more complex than simply legislating time allotments for professional development. Mere presence in a class or workshop did not equate to transformational learning and substantive changes in teacher practice (Darling-Hammond, 1999; Guskey, 1996; Guskey, 1997; Sparks, 2004). However, the acquisition of new knowledge and skills and changing old patterns of behavior through reflection and dialog does take time. And time that was specifically designed with the needs of adult educators in mind was a foundational piece of effective professional development. The

professional development standards of the National Staff Development Council (NSDC) outlined effective learning parameters.

At this time nineteen states had their own staff development councils affiliated with the NSDC. This affiliation included the adoption of these standards. (Appendix A). States that had accepted these standards or developed their own had yet another instrument useful for crafting effective professional development experiences. Standards could serve both as a guide in developing professional development opportunities and as an evaluation tool for identifying effective professional development plans, programs, and individual sessions (Guskey, 2000).

Whether the council's standards were used or others, they were typically results oriented, standards based and job-embedded. NSDC's were directed by three questions; 1) What are all students expected to know and be able to do? 2) What must teachers know and be able to do to insure student success? 3) Where must staff development focus to meet both goals (NSDC, 2001; Hirsch, 2001)? The rationale behind both having standards and specifically these standards was that they identifed the non-negotiables of effective staff development practice. They addressed the primary stakeholders in the professional development arena the students, teachers and adult instructors while focused on the overall goal of increased student achievement. But they also outlined a deeper understanding of teacher education that coalesced into a change in teachers and in teaching practices. Overlaying transformational learning theory on the twelve NSDC standards that were clustered under the three section headings of context, process and content, highlighted strengths not previously seen in the national and state legislation.

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These strengths become apparent when the standards were viewed through the lens of transformation learning theory. Context standards included the ideas of learning communities, supported adult learning and collaboration. Process standards contained multiple application pieces such as determining priorities, bringing research to bear on decision-making, choosing learning strategies and applying knowledge about learning and change. Content standards embraced the core matters of what teachers knew and were able to do. The language in this section reflected attitudes and actions indicative of the belief that learning that was more than just a number, a quantitative measure. Words and phrases such as "deepens content knowledge, prepares for understanding and appreciation, knowledge and skills to involve families" were a few substantive ideas included in the section on professional development content standards (NSDC, 2001). All three of these headings context, content, and process, and the ideas they contained, had strong correlations to the major tenets of transformational learning.

Mezirow's theory emphasized learning as a change in how an individual thought about things rather than an increase in the amount of knowledge a person had (Mezirow, 1997). This correlated to the ideas embedded in the content standards. Professional development ultimately determined to effect teachers and how they thought about their own teaching. Transformative learning also includesd components of learner 's cognitive, affective and interpersonal make up knowing individuals learn best when they have opportunities to include their personal context in their learning (Mezirow, 1991). This tenet is reflected in the context standards ideas of learning communities and collaboration. Teachers participating in the wide variety of continuing education

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opportunities available to them must eventually make connections to their individual

teaching assignment in order for them to be effective (Birman, Desimone, Porter & Garet,

2008; Hundert, 2001). The information, skills, ideas, and attitudes acted upon in

professional development session had a precise locale in which they would be

implemented. This personal context was critical to both what information they choose to

interact with and how they processed it. Learning communities and collaborative projects

with others assisted participants in connecting new information and skills to their

unambiguous situations (Fullan, 2008).

Lastly, transformational learning, according to Mezirow, was creating meaning

that in turn guided action. The process standards identified by the NSDC described

potential action steps to be taken both during and after the training teachers receive.

They included multiple descriptive phrases that linked ideas to actions. For example,

teachers would examine student data to make determinations about what to teach, which

strategies were best to accomplish that specific goal and how to monitor for impact.

These staff development standards, and others like them, were intended to be reflected in

the behaviors of teachers. The actions of teachers or the lack thereof, was one of the

areas where the dissatisfaction of the current professional development system lay (Garet,

Birman, Porter, Desimone, Herman & Yoon, 1999; Guskey, 1998; Killion, 1999; Snow-

Renner & Lauer, 2005; Sparks & Hirsch, 2002). Staff development standards were one

means of coupling teachers' on going education with increased pedagogical

effectiveness. The NSDC offered one set of potential guidelines. Many states had either

adopted their ideas or used them as a base from which to craft their own. They provided

another means through which states could potentially influence, legislatively or otherwise, the professional development going on within their borders. These standards were sometimes incorporated into the work done by the regional education laboratories or training centers. These centers were also part of the states repertoire in addressing the professional development needs of its teachers.

The ten regional education service centers linked together under the educational laboratory program each served small, identified groups of states. They were proprietary and elective in nature. Thus states and school districts could choose whether or not to establish their own affiliations and under what mutually agreed upon terms. Organizations that did engage with the labs did so for specific reasons of their own and presumably to address an identified need or set of needs. Each of the seven laboratories disclosed the organizations, companies and schools they were currently working with on their web site. McREL for example, was currently working in North Carolina focusing on principal leadership and in Wisconsin and Illinois on school improvement services. For states that had legislatively or otherwise established their own local training centers, the relationship was often more obligatory in nature. Remember Illinois, Iowa, California, Florida, Georgia, Idaho, Missouri, New York, Oregon, Rhode Island and Iowa all required their state intermediate service agencies to create professional development plans for continuing teacher education (Ward, St. John & Laine, 1999). There were several advantages and disadvantages to engaging with these educational organizations. Retuning to transformational learning and Mezirow's theory of adult learning highlighted both sides of these potential relationships.

The three interfacing tenants of Mezirow's theory addressed here are that of qualitative versus quantitative knowledge, including learners existing knowledge and background into new learning situations and utilizing individual reflection and dialogue with others to promote true learning. On the positive side of these interactions was the notion that states, school districts or individual schools working with educational service agencies could and should expect both high quality information and presentations.

Educational laboratories were experts in the field of education. They carried out and had the latest research on education and regularly trained, taught, and shared that information with adult educators. Thus they arguably had the most recent thinking in the field of teaching and knew how best to communicate that knowledge to teachers. Phrased another way they knew what was currently available and effective in the ways of content and pedagogy and were expert presenters and facilitators of that information. If that was the case then participants with these organizations could be expected to gain quantitative knowledge that qualitatively affected their teaching. In addition the manner in which this information was provided embraced teachers' individual teaching assignments, provided productive dialog with others in both large and small groups and private think time as well. That, according to transformational learning theory, resulted in true learning that in turn yielded changes in practice and increased student achievement. But there was another, less fruitful, possible relationship.

If the intermediate education organizations viewed learning from the same quantitative lens as NCLB, and as the states and most local school districts did, then learning could amount to no more than numbers on a teacher's ledger. If the requirement

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was to simply amass credits, then true learning opportunities are neither planned for nor expected. Without expecting a change in teacher's pedagogy the continuing education of teachers was merely self-perpetuating. Teachers met qualitative recertification requirements that ensured they can could teaching in the same manner in which they had for the last few years. If quantitative measures were used to document the learning that occurred there would be no reason to use the various pedagological strategies that encouraged personal reflection and application or that encouraged learning to be more than amassing knowledge. Consistent with this view of learning the strategies used in the professional development sessions might not include connections to teachers' daily classroom experiences or allow participants time to engage with other professionals. Thus it was possible that the professional development offered by national and regional educational laboratories may or may not be effective as defined by a change in teacher's practice and an increase in student success.

The point here was that the existence of educational laboratories and service centers supported the idea that the ongoing education for teachers in the minds of legislators and other stakeholders was important. However, to truly accomplish the task of educating teachers in a manner that lead to a change in their practice and improved student achievement, more than just the presence of these organizations was needed. The national and state scenes were flush with both legislation and other lawful requirements surrounding the continuing professional development of teachers. In addition there were numerous ancillary support organizations also involved in these endeavors. The ongoing dissatisfaction with the current system showed a lack of cohesiveness between these

stakeholders. To address this limitation a unifying theory from which all those involved in the professional development provided by these agencies are governed was needed. At the bare minimum a shared expectation must be that teacher professional development should yield changes in teacher pedagogy and a precipitous gain in student achievement. Outside educational organizations assisted schools in meeting their ongoing teacher education regulatory requirements as well as other professional development goals. They were a partner in meeting and implementing the varied national and state professional development policies. They were one of the many stakeholders currently involved in the ongoing education of teachers at the state level.

NCLB and the states' multiple approaches to the task of continued education for teachers across the nation was, at this point, an eclectic mix of theories, strategies, methods and ideas. The literature showed the ultimate goal of increased student achievement and teachers as the means to that end were widely agreed upon. But there was no further uniformity in the professional development arena past these two points. If the field was to make effective contributions to improving education then strategic moves toward a comprehensive approach were needed.

The research question guiding this paper was to explore the national and state policies surrounding the professional development of teachers. The literature review above addressed that question. But it also lead naturally into the local implementation of ongoing teacher education and specifically how that playd out in the myriad of school districts around our nation.

Implications

Local school districts were where professional development opportunities, their purpose and content collided with the teachers and real time teaching contexts. At the local level the required NCLB, state and school district professional development offerings actually took place. This was where the decisions regarding context, content, and process were made. Thus at the local level it was imperative that well constructed tools based on solid theoretical axioms were used to plan professional development experiences. Without a unified and systematic approach to developing ongoing teacher education opportunities the current cycle of teachers taking classes to renew their teaching certificate so they could continue to teach the same old way would continue. Documented in the early part of this paper was the dissatisfaction of all involved with the implementation of the current professional development system. In contrast to the ideas of amassing credits or PDUs and simply being passive receivers of new information was Mezirow's theory of transformational learning.

Mezirow's ideas provided a solid theoretical base from which to craft professional development experiences. Sessions, based on transformational learning, would likely insure teachers were affected because of their participation - and changing teachers was the first step to changing their teaching practice. The theory of transformational learning was the ground work for designing learning experiences for teachers that encouraged participants a) to think critically about and personally interact with new information and skills, to rework new ideas qualitatively rather than simply accept them as a new quantitative additions b) to bring their prior knowledge and

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experience to bear on the current learning experiences and weave their own personal leaning style into the professional development experience so that individual applications and connections are made and c) to talk often with each other throughout the learning experience constructing meaning and implications together in a social context, and to engage in private reflection, nourishing the individual establishment of the personal value and worth of the learning experience and its place in their teaching. Transformational learning theory could be used as a template for designing consistent and effective professional development and for evaluating it as a well.

It follows that if transformative learning tenets could be used to guide the construction of ongoing educational opportunities for teachers, then it could be also be used in an evaluative manner. Changing the lens from planning to evaluating required only minor refocusing. Planning occurred at the beginning of a program or activity and determined what was to be accomplished or what the end goal was. Evaluation, especially summative evaluation, occurred at the end of the activity and described what was accomplished, its implications and ultimately the value of the final results (Guskey, 2000). They were two different paths of the same end. Consistent planning and evaluation of professional development in alignment with Mezirow's theory of transformational learning provided a system wide approach to the ongoing education of teachers across the nation.

It was essential to have both a working theory of how professional development should be carried out so that teachers' pedagogy is positively impacted and a means to plan for and evaluate the professional development that did happen (Guskey, 2000). But

the local level also brought a new piece into play – the specific organizational context in which teachers teach. Teachers and their classrooms were members of belonged to and were a part of a much larger organizational system with multiple access points. One elementary classroom was a member of a specific grade level team, an individual school building, a small network within a district as well as a part of the larger whole school district and ultimately the state and national accountability system.

For example, Ms. Smith's third grade classroom was one of four third grade classrooms in her building. Her elementary school had early childhood education (ECE) through fifth grade with an enrolment of 565 students. Her school was part of a cluster of schools identified by her district as having a similar free and reduced lunch and English second language learner demographic. Her school was also one of 77 elementary schools in a large urban school district. Lastly, data about her classroom such as achievement tests results, attendance numbers and free and reduced lunch percentages were included in the statewide reports and ultimately compared in national figures and norms. The professional development Ms. Smith engaged in could potentially have classroom implications on any one or more of these membership levels.

This paper already explored the larger national and state context and the potential implications involved. Professional development at the local level magnified these implications because of the proximity to the teacher and the classroom itself. In the case of Ms. Smith above, she was potentially able to participate in professional development specific to third grade teachers, professional development offered to elementary mathematics teachers, professional development provided to schools educating large

numbers of English second language learners or professional development centered on the district wide implementation of new science curriculum.

In any and all of these cases the training she received must be put into practice within the walls of her classroom. But her classroom did not exist as an independent body. Thus in the wider context of building and district levels the issue of organizational support must also be included in any planning or evaluation measure (Huberman & Miles, 1984; Fullan, 1985; Guskey, 2000). This concept of organizational support was already deeply embedded within the basic tenets of transformative learning.

The foundation of transformative learning theory provided understanding of the effective components of professional development. It also included the idea of ongoing organizational support for teacher learning. Learners cannot be expected to use and apply their new knowledge or skills void of support from the environment in which they work. Successful organizations understood the need to encourage and promote new learning among their employees (Cranton & King, 2003; Neville et all 2005; Senge, Cambron-McCabe, Lucas, Smith, Dutton & Kleiner, 2000). Mezirow's theory tied individual learning to the larger context in which it occurred through the ideas of critical and personal interaction. Learners learned specifically by focusing on concrete applications, creating new thought processes based on prior knowledge, experience and current teaching assignments, and socially constructing meaning through conversation and dialog with others.

Using Mezirow's theory of transformational learning, highlighting the importance of organizational support in this process and remembering that the ultimate goal of

professional development was the increase of student achievement created the following

continuum; a) teachers participate in professional development, b) they engage with

content, skill instruction, knowledge etc… relevant to their teaching role, c) teachers

carry this new information or skill back to their specific work place, d) teachers pedagogy

is changed through interacting with the training they received and e) there is a resulting

improvement in student learning.

The thoughts represented in this continuum connect theory to specific

professional development practices and ultimately to results. It moved from simple

participation in a professional development opportunity to the acquisition of new learning

(learning defined by Mezirow as a qualitative change in the learner) to organizational

support for that change to the pedagogical change made by teachers because of their

learning and ultimately to student achievement. The flow chart in Figure 1 represented

this progression. Connecting the ideas in this way allowed the continuum to function as

either a means to plan or a means to evaluate a specific professional development

experience or an entire school district's professional development system.

Figure 1. Planning or Evaluation Continuum

Thomas Guskey in <u>Evaluating Professional Development,</u> a book published in

2000, and a subsequent article in 2002 "Does It Make a Difference? Evaluating

Professional Development" presented a framework intended for use in planning and

evaluating professional development. This framework included five levels of evaluation beginning with teachers and ended with student learning outcomes. It mirrored the continuum above. Guskey contended his model works best when *planning* professional development with the end in mind – in this case improvement in student achievement (Guskey, 2002).

It is interesting to note that working backwards or backwards planning had recently gained national recognition as a framework to help teachers clarify students' learning goals within a standards based curriculum. Understanding by Design (UbD) written by Grant Wiggins and Jay McTighe promoted the use of backwards planning as a tool to improve student achievement by focusing on teachers' lesson planning and assessment. The Association for Supervision and Curriculum Development published this book in 2005.

Guskey's use of backwards planning suggested considering student learning outcomes first and then steering backward to identify specific instructional practices needed by teachers to achieve those goals. The middle step in Guskey's framework was to examine the aspects of organizational support necessary to ensure pedagological implementation. The final two steps in planning were to identify the knowledge and skills teachers must have in order to carry out the new teaching practices and then to design the actual professional development experience. Figure 2 represented Guskey's framework from a backwards-planning perspective.

Student Achievement → Teacher Pedagogy → Organizational Support → Teacher Learning → Participation
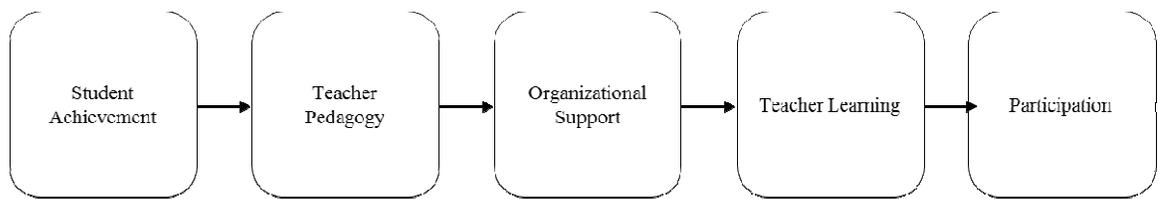
Figure 2. Guskey's planning framework

As already noted planning and evaluation were two different process of the same function. If the purpose was to develop a district wide effective professional development approach the two processes of planning and evaluation were critical to achieving that goal. The model above could be used to plan professional development experiences and also as a tool to evaluate them. For evaluation purposes Guskey started at the beginning with teachers' perceptions of and reactions to their professional development experience. Beginning at the front of the continuum each succeeding level built on the one before it. It was hierarchically arranged moving from simple ideas to more complex ones (Guskey, 2000). It followed then that success at the level of increased student achievement was predicated on success at the earlier four levels. Guskey's model addressed professional development from the perspective of the participants, the content provided within the sessions, the potential organizational supports involved, the behavioral change in teachers and the increase in student performance. This framework delineated specific objectives on five different levels. From each of these planes practical applications for planning and evaluating professional development followed. The five critical levels of professional development evaluation were more fully delineated in Appendix D.

The multiple levels of Guskey's framework allowed for consistent and purposeful data collection at various points along the continuum. Taken together these five critical

levels illustrated the importance of approaching professional development from a systems

perspective (Sparks, 1996). NCLB and other state expectations formed the outside

parameters of professional development. At the local level the decisions were made

regarding the specific contexts, content and processes. Already highlighted was the need

for a comprehensive framework for directing this multitude of decisions. Guskey's model

of planning and evaluating professional development provided local school districts and

individuals responsible for ongoing teacher education a tool to improve their efforts. A

tool to increase the effectiveness of professional development was desperately needed at

the local level. This planning and evaluation framework was the key between mediocre,

isolated staff development opportunities and transformative experiences that change

educators practice. Systematic planning and evaluation with this tool has the potential to

over hall the professional development system and enhance efforts across the nation

(Guskey, 2002).

The data collection methods and analysis presented in the subsequent chapter

propose to use this evaluation tool and the data it provided to inform the planning and

administration of professional development in a specific local school district. While this

study was restricted to only one school district – change often starts small.

Chapter Three: Method

The impact of professional development on the classroom teachers of a large

urban school district was investigated in this study. The specific constructs examined

were those identified by Guskey's (2000) framework for evaluating professional

development. Teachers' perceptions of professional development on the five different

levels presented by Guskey were explored 1) participation, 2) learning, 3) organizational

support, 4) application, and 5) student achievement. Information was also gathered to

examine teachers' 6) attitudes about learning. Additionally, this project investigated the

format, content, and process of professional development across the district.

Research approach and questions

This was a quantitative study using a survey to collect data from a representative

sample. The primary research questions for this study were:

1. What is the nature of the professional development process in the Dunbar Public School system?

2. What is the nature of the professional development format in the Dunbar Public School system?

3. What is the nature of the professional development content in the Dunbar Public School system?

4. What are the attitudes about learning of the participants who identified their professional development as effective?

5. What are the attitudes about learning of the participants who identified their professional development as ineffective or were unsure?

6.   Are there differences between teachers who identified their professional development as effective and those who identified it as ineffective or were unsure and their attitudes about learning?

7.   For teachers who perceived their professional development as effective what are the relationships between their attitudes about learning and their ideas about

    a.   participation
    b.   learning
    c.   organizational support
    d.   application of leaning
    e.   student achievement

8.   For teachers who perceived their professional development as ineffective or were unsure what relationship exists between their attitudes about learning and their ideas about

    a.   participation
    b.   learning
    c.   organizational support
    d.   application of leaning
    e.   student achievement

9.   Are there differences between teachers who perceived their professional development as effective and those who identified it as ineffective or were unsure and their attitudes about learning and their attitudes about

    a.   participation
    b.   learning
    c.   organizational support
    d.   application of leaning
    e.   student achievement

Instrument

In the literature review Guskey's (2000) work with professional development and specifically evaluating professional development was identified. He proposed a model able to systematically evaluate the national and state professional development expectations outlined in the literature review at the local level. He focused these ideas into a five-faceted tool individual school districts could apply in their particular

educational contexts. His seminal work contained the ideas investigated in this report. Lowden (2005) crafted a professional development questionnaire that operationalized Guskey's constructs.

The survey instrument used for this project, based on Lowden's 50-item "Professional Development Questionnaire," was subjected to a "jury of experts" that included an "Assistant Superintendent for Curriculum and Instruction, two college professors, and a group of teachers, and professional development committee members" (Lowden, 2005). These experts reviewed the survey and combined their expertise with existing research to develop the final survey that was adjusted for ambiguous and/or redundant questions. This jury of experts modified the format of the survey and supported the survey's content validity (Lowden, 2005).

Lowden's questionnaire contained two parts. The first section consisted of three questions that requested demographic data and seven questions that asked for information on the district's professional development process, format, and content. The second section contained 42 Likert-scaled questions centered on the constructs of participation, learning, organizational support, learning application, student achievement and attitudes and beliefs about learning. The Likert-scaled response choices were: strongly agree, agree, no opinion, disagree and strongly disagree.

The 54-question data collection instrument in this study had three main parts. The initial eight-question section of the survey was designed to obtain demographic data from the participants (gender, age, ethnicity, level of education, years teaching in this district and years teaching in total, grade level and alternative certification.) The next eight

questions addressed participants' knowledge of the district's professional development plan, process, format, and content. The 42 questions comprising the second part were clustered in small groups around the constructs of participation, learning, organizational support, learning application, and student achievement. A sixth construct of teacher's attitudes about learning in professional development was also included per Guskey's (2000) model of teacher change. The last section of the instrument contained four open-ended questions that inquired specifically about the constructs of learning, organizational support, application of learning, and student achievement

The survey used in this investigation differed from Lowden's in three ways. The first was the addition of four more demographic questions. These were questions about gender, age, ethnicity and level of education. The second difference was the addition of the four open-ended questions at the end of the survey. The last change was a question asking the participants to give an overall rating of their perceptions of professional development in their district as effective, ineffective or unsure.

The sections in the second part of survey correspond to the five facets of Guskey's (2000) model for evaluating professional development. This part also contains a sixth portion that addresses teachers' attitudes about learning. Participation was operationalized by obtaining a mean response score for questions 8 through 13. In order for teachers to receive a score for the variable of participation they needed to answer at least four of the six questions. Similarly, the mean response score of questions 14 through17 was used as a measure of learning. Participants needed to answer a minimum of three of the four questions in this section. Organizational support was operationalized

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by obtaining a mean response score for questions 18 through 22. Teachers needed to answer a minimum of three out of five questions to receive a score for this section. The mean response score of questions 23 through 27 measured the variable learning application. At least three out of five questions needed to be answered in this section. Student achievement was the mean response score of questions 28 through 34. The minimum number of questions answered here was six out of eight. The mean response score of questions 36 – 50 measured the final variable of teachers' attitudes about learning. This was the longest section and required a minimum of 12 out of 15 questions to be answered by each participant in order to receive a score

Cronbach's alpha coefficients were calculated to assess the internal consistency of the sets of questions used to operationalize the 6 constructs of the study.   Table 3 presents reliability data for each of the ideas investigated. Based on additional information obtained as part of this procedure, 3 questions were ultimately eliminated from the final score calculations. In order to improve the alpha scores, questions 20 and 21 were removed. Question 38 was taken out because the squared multiple correlation of .90 indicated there might be a problem with multicollinearity. Due to a printing error question 50 was not positioned with the first 49 questions. It had a low response rate and was omitted from all calculations from the onset. Additionally, question 22 was also excluded from calculations because its initial format was inconsistent with the other survey questions.

Table 3

Reliability Data

	Participation	Knowledge	Organizational Support	Learning Application	Student Achievement	Attitudes and Beliefs
question #	8	14	18	23	28	36
	9	15	19	24	29	37
	10	16		25	30	39
	11	17		26	31	40
	12			27	32	41
	13				33	42
					34	43
					35	44
						45
						46
						47
						48
						49
n for alpha*	180	179	184	183	177	172
Alpha	.86	.84	.86	.89	.95	.96
n for study	185	179	184	184	186	185
Mean	3.50	3.60	3.25	3.66	3.37	3.89
s.d.	0.74	0.72	0.94	0.67	0.74	0.70
Skewness	- 0.56	- 0.94	- 0.19	- 0.63	- 0.54	- 0 85
s.e. skewness	0.18	0.18	0.18	0.18	0.18	0.18
Kurtosis	- 0.11	1.25	- 0.68	0.78	0.24	0.36
s.e. kurtosis	0.36	0.36	0.36	0.36	1.26	0.36

*Note: The number of cases for calculating reliability may be less that for the study analyses because the reliability procedure uses list wise deletion and the final scores were obtained making allowances for missing data. Missing data points occurred when respondents did not answer the minimum number of questions at each construct for their data to be included in the final numbers.

The participants were divided into two groups b ased on self-report, those who felt they had experienced effective professional development and those who felt they had not. Because it was unclear how Lowden separated her participants, a question was added to the first part of the survey that asked participants to select which group they identified with. This question identified and measured the variable of professional development as effective, ineffective or unsure.

Population and Sample. The Dunbar Public School District (DPS) located in the Western part of the United States was identified as the sample school district for this study. It is the second largest district in its state and comprises 151 schools. Of these schools 70, were elementary, 16 were K-8, 17 were middle schools, 14 were high schools, 19 were charter, and 7 were alternative. Student enrollment for the 2008 – 2009 school year was 73,018.

In 2008- 2009 57% of the district was Latino, 19% was African American and 20% was Anglo. Sixty-Seven percent of the district's students qualified for free and reduced lunch. Twenty percent of the students (14, 450) indicated English as their second language. For 13,373 of these students Spanish was their native language. The other students spoke any one or more of 86 other languages.

At the time of this project the district identified its schools through geographical location, as members of a specific network and with a school performance framework label. These distinctions were used to identify a group of elementary schools that would be invited to participate in the project. The study's sample was teachers from those schools who choose to participate.

Geographically the district was centered in the heart of the city. DPS maps defining the outer boundaries and specific school locations of the district were typically divided into five areas. Two main city streets running through the middle of the city mark center points and form north/south and east/west dividing lines. The distinctions were purely geographical and served no purpose other than identifying approximate ordinal location.

Table 4 shows the number and percentages of ECE through fifth or sixth grade elementary schools in each of the five areas. Of the total number of 70 elementary schools four were eliminated because they did not meet the selection criteria of being a K through fifth grade traditional elementary school. This reduced the total number of schools in the population to 66 from which 17 were ultimately randomly selected.

Table 4

Number and Percentage of Schools by Area

Area	Number of schools	Percentage of schools
#1	15	22.7
#2	15	22.7
#3	13	19.7
#4	11	16.7
#5	12	18.1

In addition to geographical location the district also identified each elementary school as a member of one of five groups called networks. Each school was assigned to a network by the district. There is no available information about how these assignments were made. Each network represented a heterogeneous group. The five clusters of elementary schools were a mix of both geographical regions and networks. Table 5 below lists the numbers of schools and percentages of each elementary school network.

Table 5

Number and Percentage of Schools by Network

Network	Number of schools	Percentage of schools
#1	14	21.2
#2	15	22.7
#3	13	19.7
#4	11	16.7
#5	13	19.7

Beyond a region and network designation, the district also gave each school a performance rating. There were four different ratings; distinguished, meets expectations, accredited on watch and accredited on probation. These ratings were a summation of student achievement and school organization data and were found in the heading of each school's performance framework (SPF). Table 6 shows the ratings of the elementary schools in DPS at each of the four levels for the 2008 – 2009 academic year.

Table 6

Number and Percentage of Schools by SPF Rating

Rating	Number of schools	Percentage of schools
Distinguished	7	10.6
Meets expectations	27	41.0
Accredited on watch	22	33.3
Accredited on probation	10	15.2

In sum, each school in DPS was located in a specific geographical region in proximity to other schools, a homogeneous network of other like-leveled schools such as high school or elementary and finally labeled by a district-wide rating measure that evaluated the strength of the individual academic program at each building. The geographical, network, and school performance ratings were used to identify a smaller representative sample of schools within DPS. Currently, the organizational structure of networks is no longer used as an identifier in DPS. The geographical locations and SPF identifiers are still in use.

The final 17 schools were selected randomly from each of the identified sub populations: networks, regions and SPF. Every attempt was made to include schools in the sample that reflected the district's overall numbers and percentages. To ensure the anonymity of the volunteer schools the specific identifiers of network, region and SFP rating for each school were omitted. Tables 7, 8 and 9 show the breakdown of the sample schools in relation to the overall district.

Table 7

Network

Network	Number of schools	Percentage of schools (Bold =DPS #s)
#1	5	31.25 (**21.2**)
#2	1	6.25 (**22.7**)
#3	3	18.75 (**19.7**)
#4	3	18.75 (**16.7**)
#5	4	25.00 (**19.7**)

Table 8

Region

Region	Number of schools	Percentage of schools (Bold =DPS #s)	
#1	3	18.75	**(22.2)**
#2	4	25.00	**(22.7)**
#3	2	12.50	**(19.7)**
#4	5	31.25	**(16.7)**
#5	2	12.50	**(18.1)**

Table 9

Performance Rating

Rating	**Number of schools**	**Percentage of schools (Bold =DPS #s)**	
Distinguished	3	18.75	**(10.6)**
Meets expectations	6	37.50	**(41.0)**
Accredited on watch	6	37.50	**(33.3)**
Accredited on probation	1	6.25	**(15.2)**

Procedure. After district wide permission was obtained, each of the 17 schools in the sample was contacted via e-mail. The e-mail text sent is Appendix G. When the principal or other designee responded, a meeting time with faculty members was scheduled and placed on the school's calendar. Sometimes these dates were easily set through e-mails. At other times phone calls facilitated finding a compatible meeting time. If a school did not respond to the initial e-mail, a personal phone call was placed to the

school's administrator. Through a combination of e-mails and phone calls twelve of the

initial schools agreed to participate. To replace the schools that declined or did not

respond, five different schools were invited to participate in the study. Their region,

network and SPF descriptors were matched as closely as possible to the schools that

choose not to participate.

At the individual school meetings, a brief introduction to the investigator's

background was given, the purpose of the study was presented and the survey handed out.

In an effort to make each data collection session uniform, a specific script containing the

information above was read at each school. A copy of the script is in Appendix H

Teachers who chose to, complete the survey at that time. Finished surveys were gathered

at the end of the meeting by the investigator. Any teachers who felt they needed more

time to respond to the survey were offered the opportunity to return it via school mail.

Participants. A total of 266 surveys were collected. Of these 5 were excluded

from the data set because they did not meet the projects requirements. One survey was

completed by a long-term substitute in the district; one survey identified the respondent

as only having a high school diploma and no further education and building

paraprofessionals filled out three surveys. Of the remaining 261 surveys, 186

respondents met the study's final criteria.

Data were collected from each of the 17 sample schools. Each of the surveys was

anonymous. The only identifying information on each of the surveys was the DPS school

number. This allowed the data to be disaggregated by individual schools as some

principals had requested feedback regarding the school, as a part of their agreement to participate.

At the end of the survey collection period the data were reviewed. Eight respondents did not answer question 7 regarding whether they felt their professional development experiences overall were effective or ineffective or were not sure. These surveys were revisited to see if there was enough data to determine an answer to this question. Ultimately 3 were added to the effective group, because the preponderance of answers were either strongly agree or agree. Three were put into the ineffective group as the majority of responses were marked strongly disagree or disagree. Two surveys were omitted because they did not contain enough data to allow them to be placed definitively in either the effective, ineffective, or unsure consideration group. One survey marked primarily, no opinion for most questions. The other marked two sets of answers, one for in school professional development and the other for district professional development off site.

Statistical analyses. Frequency distributions based on responses to the first eight items and to questions 36 – 50 were obtained to provide demographic data about the sample and to address research questions 1 through 5.

Independent samples t-tests were used to answer research questions six and nine. Pearson product moment correlation coefficients were obtained to address research questions seven and eight. In addition, the assumptions of a) normality of the data, b) independence, and c) homogeneity of variance for the t-test were examined. The normality of the six variable scores of participation, learning, organizational support,

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application, student achievement and attitudes and beliefs about learning was assessed by examining each for skewness and kurtosis and through histograms with normal curve overlays. A test of the homogeneity of variances was obtained for the t-test using Levene's statistic. The Statistical Package for the Social Sciences (2009) was used to obtain the descriptive statistics and run the inferential analyses for this project

Chapter Summary

This chapter stated the nine main research questions for this quantitative study, and the reasons behind the population choice and sample identification. The data collection instrument and procedure were explained. The statistical analyses for the data were also delineated.

Chapter Four

Respondent Demographics

A total of 266 surveys were collected. Of these 5 were excluded from the data set because they did not meet the projects requirements. One survey was completed by a long-term substitute in the district; one survey identified the respondent as only having a high school diploma and no further education and building para professionals filled out three surveys. Of the remaining 261 surveys, 186 respondents met the study's final criteria.

The purpose of the study was to investigate the professional development of the Dunbar Public School district and to use the information to strategically plan and improve the overall system. To accomplish this goal the sample enlisted only classroom teachers ECE through fifth grade. This is because the preponderance of district money, time, personnel, and materials support the efforts of teachers who teach in self-contained classroom contexts. Any study desiring to improve large-scale professional development must concentrate on these teachers. The results in this study are presented only through the eyes of ECE through fifth grade classroom teachers.

Table 10 details the sample's demographics with regard to gender, age, and ethnicity. As is common across the country in elementary schools, the sample is predominantly female (84%) and predominantly white (76.9%.) Implicit in this data is the need for DPS to understand that the white, female teachers they are training are

primarily working with children of color. The percentage of black and Hispanic students in DPS was 79% in 2008-2009.

Almost one quarter of the sample was aged 50 years or older**.** In contrast 29.9% of the respondents were between 20 to 30 years of age. These data could be potentially significant as the number of individuals choosing teaching as a second career is seemingly on the rise. Thus the average age of teachers engaged in professional development opportunities is becoming more evenly distributed across the age continuum. These data are presented in Table 10.

Table 10

Gender, age, and ethnicity of population sample

		Count	Total
		N	%
Gender	Male	25	13.8
	Female	156	86.2
Age	20–25	21	11.7
	26 -30	31	17.2
	31 -35	30	16.7
	36 -40	25	13.9
	41 – 45	16	8.9
	46 – 50	13	7.2
	50+	44	24.4
Ethnicity	Native American	1	.50
	Asian	1	.50
	Black	8	4.4
	Hispanic	35	19.2
	White	137	75.3

Table 11 details the respondents' levels of and experience in education as well as their experience in DPS. Participants were also asked if they were now or ever had been enrolled in an alternative licensure program. One quarter of the sample entered the

teaching profession through nontraditional teacher preparation means. This number is

expected to increase due to the university and college commitments to alternative

teaching license programs. Thus, particular attention may need to be paid to this

population and their professional development needs and experiences. Individuals who

come to teaching via alternative means often participate in abbreviated training programs

that may or may not include basic foundational education background.

Table 11

*Education and Experience Level of Sample and if They Had or Have an Alternative
License*

		Count	Total
		N	%
Education Level	Bachelors	29	15.8
	Bachelors +	63	34.2
	Masters	44	23.9
	Masters +	47	25.5
	Doctorate	1	.5
# of years in Teaching	1-3	52	28.4
	4-9	51	27.9
	10-19	48	26.2
	20+	32	17.5
# of years in DPS	1-3	62	33.9
	4-9	57	31.1
	10-19	43	23.5
	20+	21	11.4
Alternative license	Yes	43	24.6
	No	132	75.4

Almost fifty percent (49.9%) of respondents had a masters degree or beyond.

Typically now, or in the very recent past, teachers were paid more for each level of

education they obtained. Thus is it not uncommon to find a teaching faculty where

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numerous individuals possess advanced degrees. However, given the previously cited

ages (24.2% at 50 or older) of this sample, is it noteworthy the respondents' years of

teaching in DPS (11.4%) and in teaching in general (17.5%) is less than would seem

compatible for their maturity. This is possibly because numerous alternative licensure

programs target older individuals who wish to make a career change later in their life.

Research question 1

The first research question investigated the nature of the professional

development process in DPS. Questions about the professional development process

addressed the means by which information was conveyed in the sessions. Teachers were

encouraged to interact with each other (78.5%) with an eye towards improving student

achievement (79%) the majority of the time. But less than half of the sessions supported

developing classroom applications (48.9%) and personal reflection time for teachers

(47.3%). These data suggest the individual contexts and personalities of teachers are not

factors considered by DPS in designing professional development opportunities. The

results for the DPS professional development process item are found in Table 12.

Table 12

The Professional Development Process in DPS

	Count	Total
	N	% of total
Interaction with others encouraged	146	78.5
Student achievement promoted	147	79.0
Information and practices integrated into the teacher evaluation system	55	29.6
Scientifically based PD practices used	74	39.8
Classroom applications highlighted	91	48.9
Participants given time to reflect and find individual applications	88	47.3

Research question 2

The second research question investigated the nature of the professional development format in which teachers in DPS chose to participate. Format questions asked respondents to identify the arrangement or design of the professional development sessions they attended. The largest attendance percentages for professional development opportunities were provided by the district in the form of half or full day sessions (87.1%) or other ongoing professional development activities (83.9%). On the other end of the continuum much smaller percentages of teachers attended expert-led sessions (54.8%) or conferences (37.6%). These figures indicate teachers more often accessed shorter professional development sessions offered by district personnel. Additionally, less than half of the time, teachers participated in on-site structured interactions with their peers such as book study 42.5% and peer observations and discussions 45.7%. A summary of the data on the format of DPS professional development opportunities is presented in Table 13.

Table 13

The Professional Development Format in DPS

	Count	Total
Large Scale opportunities	n	%
College/university classes	111	59.7
Ongoing district PD	156	83.9
District ½ or full day sessions	162	87.1
Expert led presentations	102	54.8
District, state or national conferences	70	37.6
Small scale opportunities		
Participation in a district wide PDU	125	67.2
Peer group book study	79	42.5
Classroom room observation or assessment by an administrator	119	64.1
Peer classroom observations with discussion and Feedback	85	45.7

Research Question 3

The third research question asked the nature of the professional development
content in DPS. The first two questions investigated whether the sessions teachers
attended were about increasing their content knowledge or their pedagogical knowledge.
These results indicate there is a dual focus in most professional development sessions on
both content (75.3%) and pedagogy knowledge (80.6%). This information is presented in
Table 14.

Table 14

Professional Development Content Knowledge in DPS

	Count	Total
	n	%
Content knowledge	140	75.3
Pedagogy knowledge	150	80.6

Classroom teachers were also asked what the professional development sessions they attended were about. Overwhelmingly the majority of teachers attended professional development on literacy (87.6%). The next largest percentage of respondents attended math professional development (60.8%). At this time there is mandatory statewide elementary assessment of second through fifth graders math and literacy skills and science assessment only at the fifth grade level. Results are presented in Table 15.

Table 15

Professional development content in DPS

Subject	Count N	Total %
Math	113	60.8
Science	106	57.0
Social studies	87	46.8
Literacy	163	87.6
RtI	114	61.3
Special Education	21	11.3
Discipline	72	38.7
Bullying	51	27.4
Data analysis	105	56.5
Other	21	11.3

Research question 4

Slightly more than half of the survey respondents (54.3%) identified their

professional development as effective. The fourth research question investigated the

attitudes about learning in professional development situations of these 101 respondents.

Questions 36 to 49 asked teachers when their attitudes about learning were affected in the

professional development sessions they attended. Teachers were offered the following 5

answer choices; strongly disagree, disagree, no opinion, agree, and strongly agree.

However, in Table 7 the data are presented only as disagree, no opinion and agree. For

the purpose of this study, the magnitude of their agreement or disagreement was not a variable examined in the final analysis.

Table 16 presents the data for those participants who felt they had attended effective professional development sessions. These data suggest teachers feel positive about professional development when both their classroom experiences and their self-assessment are impacted. For these teachers professional development is effective when they learn practical strategies (97%), become more effective as teachers (96.1%) and when their teaching itself is more effective and productive (95.1%).

Additionally, teachers consider professional development experiences effective when they are meaningful (94%) and they feel proud of themselves 92.2%. On the other end of the continuum professional development was considered effective by smaller percentages when it impacted student behavior (74%), teachers' annual performance evaluations (76%) and when they were recognized for their efforts (78.2%). These data suggest teachers are more intrinsically motivated by teaching well in their classroom than by external praise and recognition. This has implications for teacher merit pay and other such teacher remuneration proposals as well as the numerous teacher evaluation systems currently being crafted across the nation.

Table 16

The Attitudes About Learning for Participants Who Think Their PD Was Overall Effective

My attitudes about learning were affected when…	Disagree		No opinion		Agree	
	N	%	n	%	N	%
The experience was meaningful	0	.0	4	.4	94	94.0
Practical instructional strategies were learned	1	1.0	2	2.0	98	97.0
Teaching became more effective and productive	1	1.0	4	4.0	96	95.1
I became more productive and effective as a teacher	1	1.0	3	3.0	97	96.1
The experience was enjoyable	0	.0	11	11.0	89	89.0
I was empowered in new ways	2	2.0	11	10.9	88	87.1
I learned how to meet various student's needs	5	5.0	10	9.9	86	85.2
It had a positive impact on student behavior	5	5.0	21	21.0	74	74.0
Students became actively engaged in learning	2	2.0	13	12.9	86	85.1
It had a positive impact on student achievement	2	2.0	9	9.0	89	89.0
It impacts annual performance	5	5.0	19	19.0	76	76.0
I receive positive feedback from supervisor	6	6.0	13	13.0	81	81.0
My efforts are recognized	7	6.9	15	14.9	79	78.2
I feel proud of my accomplishments	0	.0	8	7.9	93	92.1

Research Question 5

The fifth research question investigated the attitudes about learning of the participants who identified their professional development as ineffective or were unsure. Table 8 summarizes the data for those 85 survey respondents who felt their professional development was overall ineffective or who were unsure. Overall the ineffective/unsure group mirrored their counterparts in what they identified was part of effective professional development but with less intensity – generally 20 percentage points less. Similar to the effective group, these respondents agreed they felt better when they learn practical teaching strategies (77%) and are proud of themselves (73.8%). The percentages are 20% to 18% lower respectively.

Like their peers in the effective group these teachers also seemed to be less motivated by impacting student behavior (59.6%), and their annual performance evaluations (56.7%) and when their efforts were recognized (60.3%). The data for the group who determined their professional development was ineffective and their attitudes about learning are presented in Table 17

Table 17

Attitudes About Learning for Participants Who Think Their PD Was Overall Ineffective or Who Were Unsure

attitudes about learning were affected when…	Disagree		No opinion		Agree	
	N	**%**	**n**	**%**	**N**	**%**
The experience was meaningful	15	17.9	10	11.9	59	70.2
Practical instructional strategies were learned	12	14.3	7	8.3	65	77.4
Teaching became more effective and productive	11	13.1	15	17.9	58	69.1
I became more productive and effective as a teacher	8	8.4	20	23.8	56	66.7
The experience was enjoyable	17	20.5	15	18.1	51	61.4
I was empowered in new ways	14	17.1	16.	19.5	52	63.4
I learned how to meet various student's needs	15	18.1	16	19.3	52	62.7
It had a positive impact on student behavior	16	19.1	18	21.4	50	59.6
Students became actively engaged in learning	12	14.3	16	19.0	56	66.6
It had a positive impact on student achievement	12	14.5	15	18.1	56	67.5
It impacts annual performance	18	21.7	18	21.7	47	56.7
I receive positive feedback from supervisor	11	13.1	20	23.8	53	63.1
My efforts are recognized	14	16.9	19	22.9	50	60.3
I feel proud of my accomplishments	7	7.1	15	17.9	62	73.8

Research Question 6

The sixth research question asked if there was a difference in the attitudes about learning between teachers who perceived their professional development as effective and those who identified it as ineffective or were unsure.

As a preliminary step in the analysis to address this question the assumption of homogeneity of variance between the two groups was examined. The Levene's test for equality of variance was significant ($F = 23.04$, $p \leq .001$) indicating that the assumption of homogeneity of variance was violated. Therefore, the independent sample t-test used to address question 6 was calculated assuming unequal variances. The results of the t-test found the mean for the effective group ($4.08 \pm .049$) was significantly higher than that of those who placed themselves in the ineffective professional development group (3.67 ± 0.85, $t (127.25) = 3.94$, $p \leq .001$. Teachers who labeled their professional development as effective were generally more positive and looked for ways to apply what they were learning in their specific teaching contexts. This was a value to them and seemed to be part of the key to ensuring professional development was effective in the eyes of its participants.

Research Question 7

Question 7 investigated what relationship existed between teachers' attitudes about learning and the other variables of participation, learning, organizational support, application of learning, and student achievement identified in Guskey's evaluation model for teachers who labeled their professional development as overall effective.

All the construct associations, except for the relationship between the variable of

participation and the attitudes about learning, were statistically significant. Although the

correlation with organizational support was significant at the $p < .05$ level the relationship

was only low to moderate. Higher correlations were found between teachers' attitudes

about learning and the application of that learning. This seems to indicate teachers felt

better about the professional development they received when they learned more in the

sessions they attended and when they were able to apply that knowledge in their

classrooms. There was also a correlation between teachers' attitudes about learning and

student achievement. This may indicate teachers feel professional development is

effective when it influences their pedagogy in ways that help their students succeed.

Table 18 contains the correlations.

Table 18

Pearson Correlations for the Group Who Considered Their PD Effective between
attitudes and Guskey's five constructs

Attitudes.

Construct	Count N	correlation r	significance P
Participation	101	.12	.23
Knowledge learned	97	.31	.002**
Organizational support	101	.23	.02*
Application of learning	100	.41	.001***
Student achievement	101	.36	.01***

*p ≤ .05,** p ≤.01,*** p ≤.001

Research question 8

Question 8 investigated what relationship existed between teachers' attitudes

about learning and the other five constructs of participation, learning, organizational

support, application of learning, and student achievement identified in Guskey's

evaluation model for teachers who labeled their professional development as overall

ineffective or who were unsure. The only significant relationship was between teachers'

attitudes about learning and their ability to apply their learning in specific teaching

contexts. It seems this is a value teachers hold for determination of successful

professional development. Table 19 contains the correlations.

Table 19

Pearson Correlations for the group who considered their PD ineffective/unsure group between attitudes and Guskey's five constructs

Construct	Count	correlation	significance
	n	R	p
Participation	83	.16	.16
Knowledge learned	81	.17	.12
Organizational support	82	.20	.07
Application of learning	83	.31**	.005
Student achievement	84	.15	.16

*p ≤ .05, ** p ≤.01, *** p ≤.001

Research Question 9

The final research question investigated the differences between the two groups of

teachers, those who labeled their professional development as effective and those who

didn't, on their attitudes on all five of Guskey's constructs. Levene's test was used to

determine if the variances were equal across both groups for the five ideas of

participating, learning, organizational support, application of learning and student

achievement. These tests were significant for all variables except for organizational support. Therefore, t-tests were based on unequal variances for all but organizational support. The results of the analyses were significant for all variables

Statistically significantly higher means were evident on all five variables for those participants who identified their professional development as effective than for those who claimed it was ineffective. The differences in the means ranged from .56 - .78. On two constructs participation and organizational support the means were almost a full point higher (.93, .91.)

Overall these data seem to show teachers who are generally more satisfied with their professional development are more positive on each of the five variables examined in this study. Conversely, those who identified their experiences as ineffective were generally less positive on all five of the variables. This appears to be true especially in the area of participation. Teachers in the effective group more strongly agreed their time in professional development activities was positive and well spent with instructors who were knowledgeable and effective.

Organizational support was another variable where the two groups differed largely. Teachers in the effective group were more optimistic regarding the support they received form their individual buildings than were those teachers in the ineffective group. . Means, standard deviations, Levene's result, and t-test results are presented in Table 20.

Table 20

Means, Standard Deviations, Results of Levene's Test for Homogeneity of Variance, and t-Test Results for the Effective Group and the Ineffective Group

	Group						Levenes		t-test	
	Effective			Ineffective			F	*p*	T	*p*
	$\overline{X}$	SD	N	$\overline{X}$	SD	n				
Participation	3.92	0.50	101	2.99	0.67	84	14.42	≤.001	10.54	≤.001
Knowledge	3.97	.42	97	3.19	.77	82	40.4	≤.001	8.17	≤.001
Organizational support	3.66	.84	101	2.75	.81	83	0.01	.93	7.53	≤.001
Application of knowledge	3.92	.52	100	3.36	.52	84	13.44	≤.001	6.10	≤.001
Student achievement	3.69	.58	101	3.00	.74	85	8.77	.003	6.95	≤.001

The last page of the survey contained four opened-ended response items that mirrored four sections of the instrument. In review, these sections contained questions that investigated learning in professional development, organizational support, and teachers' application of learning and student achievement. The open-ended comments participants provided were not collectively examined. Instead, their responses were embedded into the study's discussion section. They provided illustrative examples of data culled through this investigation. The first open–ended query "In what ways have your professional development experiences contributed to your knowledge and skill base?" corresponded to survey items 14 through 17. These four questions asked the participants if they learned practical instructional strategies, new knowledge and skills, theory, and concepts connected to their prior knowledge. Below are some of the written responses from the survey.

These comments echo the current understanding that professional development is by, for, and about increasing teachers' knowledge and skill base. Table 21 contains these responses.

Table 21

Teachers' Responses to Ways Professional Development Contributed to Their Knowledge and Skill Base

Many of them added more knowledge or new research-based information
It has given me general knowledge of different types of programs
It has tweaked the knowledge and skills I gained through my undergrad degree
As a licensed teacher pd's have added to my skill set
Most pd revolves around learning new curriculum or content
I feel like pd doesn't contribute to my skills
Somewhat has made me more knowledgeable
I have gained new knowledge of skills and strategies in new programs
We do way too much cooperative learning. I want facts, not a half day to debrief with peers

The second query "How are you supported in what you learn in your professional development?" parallels questions 18 and19 in the survey. These two items asked if the professional development teachers experienced had a positive impact on the organization as a whole and on the culture and climate at the school.

Many of these responses indicate DPS is meeting NCLB's definition of high quality professional development by providing ongoing, embedded opportunities for teachers to learn that are connected to their everyday teaching contexts.

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Table 22 contains some of the written responses to the second question.

Table 22

Responses to the support Teachers Receive in Their Professional Development Learning

We usually do not receive support unless it is something our administrators is forcing us to comply with
Great principal and facilitator check in
We have follow up meetings to see how our strategies are working
I have people come in my room and help
I don't feel supported
This school has an excellent support system in place to check in with where I need assistance
I feel we are on our own
There is a lot of ongoing assistance with pd
In subjects like literacy I feel strongly supported…science and math not so much
Principal notices when we use new skills

The third open-response question "How have you used what you learned in professional development opportunities in your classroom with your students?" corresponds to survey items 23 through 27. These questions asked teachers what happened after their professional development experiences. Were new strategies implemented, practiced with, and committed to? Did new strategies make positive changes in teaching and were these changes long-lasting. Comments indicate many teachers do take back what they learn in professional development and use it in their classrooms. However, many comments also show teachers leave what they learn – where

they learned it. For professional development to be effective it must change the day-to-day interactions of teachers with their students. A deeper definition of learning must include extending the previous knowledge base by adding more content but also interweaving that learning into classroom practice so that students are affected. A few of the participants' written responses are below in Table 23.

Table 23

Teachers' Responses to their Learning from Professional Development Sessions

Go back to class and implement new strategies
Direct application to everyday practice
Usually not much goes back to the classroom due to lack of time and support
I have taken the ideas I have learned with my other colleagues…it's a great resource
I consolidate new ideas with my own style of teaching
Yes and no – I take parts that are relevant or that I think will work and leave the rest
I have used the required items in my classroom
I've incorporated some teaching strategies
Sometimes I can implement – but sometimes not
Sometimes – when it's optional…always if it is mandatory
Implemented new ideas in the classroom and new teaching strategies
Yes and no – I take parts that are relevant or that I think will work and leave the rest

The last open-ended response opportunity "In what ways has your professional development affected your students achievement?" is reflected in questions 28 through 35. This item set investigated teachers' thoughts on whether professional development had a positive effect on students' learning, achievement on district and teacher

assessment, students' level of engagement and their confidence. Teachers' comments about their students' achievement or lack there of are mixed. With the current state wide testing mandates, most third grade teachers and above receive their students' scores after those students have left their classrooms and are enrolled in the next grade. Other less stringent standardized measures and informal assessments offer more immediate results. This allows teachers to gage the students' achievement against their regular teaching practices. It is possible this distance between final assessment results and daily pedagogy is responsible for the disconnect teachers report about their student's academic progress. Table 24 contains a few of their thoughts.

Table 24

Teachers Responses to Ways Professional Development Affected Student Achievement

We have increased on automaticity and skills recall

It hasn't affected them much as the things implemented are very small

Overall student achievement is low and pd needs to address student apathy

I don't think most have affected it…some pd's have helped but most have not

I believe it has helped my delivery of the curriculum

I'm not sure

Yes!

It has greatly improved it

Students are engage and many scores have gone up

Some what

I hope the stuff I am learning is increasing their achievement

I don't' think it has – many students need confidence/emotional supports

I think some of the pd classes have affected my students' achievement

Hopefully it has helped

Don't know

These four open-ended response questions reflect the common understanding of professional development as additive in nature as an experience that increases a teacher's existing knowledge and skill base. Responses indicated teachers are mixed in the level of support they receive from their schools and in their application of things they learned in professional development sessions. Student achievement and confidence levels are also

mixed, as many teachers do not see links to students' improved academic performances due to their participation in professional development.

Chapter Five: Summary

There is widespread agreement in education regarding the purpose of ongoing teacher professional development. It intends to qualitatively and quantitatively extend an educators' skill set so that they are continually effective in the classroom. Like any other profession teachers must keep their skills sharp and updated as the educational system is only as good as its players. The key to this quality education for all students is the classroom teacher, but not just any classroom teacher (Killion & Harrison, 2006). Students must have skillful, highly effective teachers who have consistent access to ongoing professional development (Guskey, 1997; Guskey, 1998; Maldonado, 2002; Sparks & Hirsch, 2000).

NCLB offers broad guidelines for effective professional development acknowledging the integral nature of ongoing professional development that seeks to ensure teachers continually possess the knowledge and skills necessary to successfully perform their duties (Lauer & Dean 2004). NCLB requires all 50 states to provide "high-quality" professional development that will ensure every teacher is both highly qualified and highly effective. The federal government's definition of high-quality professional development includes activities that improve and increase teachers' academic knowledge, are part of school and district improvement plans, provide teachers the knowledge to meet state content standards, are sustained, intensive and classroom focused, support the recruiting, hiring and training of high quality teachers, expand teachers' understandings

of effective instructional practices, are built upon scientifically based research practices, and support increased student achievement. They are not 1-day or short-term workshops or conferences" (NCLB, 2001).

States interpret these guidelines and add their own varied legislative requirements, suggestions, and expectations. The current result is an eclectic mix of ideas, methods, and approaches and to date there is no widespread use of an evaluation tool to determine the effectiveness of all of these efforts. As expected then, there is much dissatisfaction with the existing state of affairs from all the stakeholders, policy makers, school districts and teachers. However, all agree the ultimate goal of teacher professional development is to increase student achievement (Sever & Bowgren, 2007; Dean & Lauer, 2001; Guskey, 2002; Killion, 2002; Neville, Sherman & Cohen, 2005; Shaha, Lewis, O'Donnell & Brown, 2004). There is further agreement that the path to higher student assessment scores, the prevailing definition of student achievement, is through quality teachers and their ongoing support through continued education.

Thus states must seek to educate their teachers in ways that ensure teachers' classroom practices are changed through and because of their participation in professional development and that these changes promote student achievement. Given the national expectations for the ongoing education of teachers, the state recertification requirements and the local obligations of school districts and teachers it is clear the ongoing education of teachers is a colossal enterprise. And as is true of large-scale enterprises, they are expensive. The existing reality is that school districts across the nation spend copious quantities of time and money on the continuing education of the

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teachers they employ. Fiscal responsibility necessitates asking multiple questions regarding the efficacy of these choices.

Therefore tools, theoretically sound with concrete applications, are needed to evaluate the professional development programs of school districts across the nation. Only with a systematic and comprehensive mindset can professional development exercises be evaluated to determine if they are indeed serving the purposes they are intended to. One means of accomplishing this task is to view the national and state professional development legislation through the eyes of Jack Mezirow's (1978) transformational theory of adult learning. This lens highlights the existing strengths and gaps of current professional development programs on an individual basis.

Jack Mezirow's (1978) research primarily focused on adult women returning to higher education after an extended absence He identified conditions and methodologies that catalyzed changes in ways of thinking and acting in these students. This change he identified as learning – true learning, the goal of all education. Transformational learning, Mezirow labeled it, is when a person interacts with knowledge or experience, takes it in, assess and evaluates it and then determines not only where it fits in his/her scheme of things but also how that learning impacts their current thinking and behavior. Learning looks different for each student and yet education, at all levels, seeks to teach every student in ways that result in learning. Each learner, each student is important.

But education in this county is not done individually on a case-by-case basis. It is done in large groups orchestrated by even larger systems. Therefore, a wider net is needed. Mezirow's ideas on transformation learning that informs and empowers

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individuals can also be described as the application of new learning or knowledge in real-time settings. Thomas Guskey, a current practitioner in the field of education and the professional development of teachers, also believes this is an important concept. He crafted a five -tiered evaluation tool that centered on the application of learning to accomplish the ultimate goal. Again, for teachers, the ultimate goal is the success and achievement of students. Guskey suggested examining what is being done in the ongoing education of teachers by focusing on the learners and the changes in their thinking and in their behavior. But his ideas include more that just teachers as individuals.

The constructs outlined in his model are participation, learning, organizational support, application of learning, and student achievement. His ideas are arranged hierarchally and success at the upper levels is predicated on success at the beginning levels. This tiered model allows for a wider lens view of professional development. It includes the context of district professional development programs where most educators receive their training as well the ultimate goal of continuing to train teachers – affecting students.

Mezirow's theory is replete with ideas on how to ensure teachers in professional development activities actually learn from those activities as evidenced by what they do in their classroom. Moving from individual teachers 'professional development experiences with Mezirow, to large-scale district professional development programs requires a larger systematic model such as Guskey's. Thus, Mezirow's theory of adult learning is overlaid with Thomas Guskey's (2000) model of effective professional

development. It is this investigator's opinion that both perspectives are necessary in order to be inclusive of students, teachers, schools and districts in broad evaluation strokes.

In sum, there are national, state, and local expectations for the professional development of teachers. These expectations result in large expenditures of time and money for local school districts. Because of the large outlay of money and more importantly because the ultimate goal of professional development is the success of all students, it is important to consider the effectiveness of the current activities. A systematic, sound theoretical assessment and evaluation of the ongoing education of teachers needs to be conducted nationwide. This study is one small step towards that end.

This specific investigation explores the professional development system of a large, urban school district using a survey constructed around the five constructs outlined in Guskey's evaluation tool. The purpose was to investigate the professional development program of the Dunbar Public School district and to use the information to strategically plan and improve the overall system. To accomplish this goal 186 ECE through fifth grade classroom teachers filled out a 54-question survey. The items in the survey asked participants about their experiences with the processes, formats and topics of the DPS professional development activities they participated in. The study also examined teachers thoughts regarding their own participation, learning, organizational support, application of learning and student achievement.

Summary

Findings show these teachers participated in professional development opportunities where the information conveyed was done so, in part, by supporting teachers' interactions with each other. Which means participants were encouraged to talk about their practice and about their learning with each other during their sessions. This process of training occurred in the majority of the sessions teachers attended. However, less than half of the times were personal reflection and individual teaching contexts considered. This disparity has significant planning and implementation implications.

With regards to the format of the professional development sessions offered, educators participating in this survey primarily attended half or full day training sessions sponsored by the district or other kinds of professional development activities that were connected to one another and stretched out over a period of time. Conferences or sessions led by experts were attended much less frequently. As far as the content of professional development session is concerned, teachers were asked what the sessions they chose to attend were about and if the focus was increasing their content knowledge or their pedagogical understandings. Teachers most often chose professional development options that centered on literacy and math and less so on other subjects such as science and social studies. They choose to attend, in even measures, sessions that focused on increasing both teachers' content and pedagogical knowledge.

Slightly more than half of the respondents felt their professional development experiences were effective overall. The attitudes about learning of these teachers were positively affected in professional development sessions when their classroom

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experiences and self-assessment were impacted, when they learned practical strategies and when they became more effective as teachers. Educational experiences that encouraged teachers' feelings of pride in their individual work and helped them develop a sense that they had become more effective and productive instructors in the classroom were part of what these teachers identified as included in effective professional development.

Less than half of the participants determined their professional development activities had been overall ineffective. For these teachers, similar to their counterparts, effectiveness and productiveness in the classroom as well as a sense of pride was a part of what they considered effective in their professional development experiences. However, these feelings were less strong in these participants than in those who felt overall more positively about their experiences. Teachers in both groups were seemingly less motivated by affecting student behavior, being recognized for their efforts and by impacting their annual performance appraisal.

There were differences in the attitudes about learning between these two groups of teachers – those who identified their professional development as effective and those who identified it as ineffective or were unsure. Overall the results of the t-test found that the attitudes about learning of teachers in the effective group were significantly higher than that of teachers in the ineffective. In other words teachers who felt their professional development was effective were generally more positive about their professional development experiences.

The study also investigated possible relationships between the attitudes about learning of the teachers who identified professional development as generally effective and their ideas of participation, learning, organizational support, application of learning and student achievement. Positive high correlations were found between teachers' attitudes about learning and the constructs of learning in professional development sessions and the application of that learning in personal contexts. A positive low correlation was found between teachers' attitudes and beliefs about learning and organizational support.

A counterpart to investigating the attitudes about learning of teachers with positive feelings about their professional development was investigating the attitudes and beliefs of those who didn't feel their experiences were effective. For this group of teachers, there was a positive correlation between their attitudes about learning and their ability to apply their learning in specific classroom situations. The ability to transfer learning from one setting to another was considered valuable to this set of individuals.

As was the purpose of this study, these findings have significant ramifications for the future planning and implementation of professional development in DPS. The results can more fully inform DPS as they seek to meet the needs of NCLB, state, and local professional development expectations, their teachers and ultimately their students. The following conclusions offer possible ways these ideas could effect change in the professional development program in DPS.

Discussion

Keeping in mind that NCLB oversees all state and local professional development opportunities nation wide and its specific identifiers of what high quality professional development is – creates the starting place for this study that examines DPS professional development offerings in its light. In addition, Guskey's evaluation framework allows for the data collected from this organization be used to recognize places where large-scale improvements could be made. Continuing the evaluations on a micro level, where teachers are affected personally, requires the fine lens of Mezirow and his ideas on transformation learning.

The first pieces of the investigation delved into the process, format and content of the current professional development program in DPS. While basic descriptive statistics answered the gist of the questions there was more data to be teased out of the findings.

The initial question of the study investigated the nature of the professional development process in DPS. Queries about the professional development process asked about the means through which information was conveyed in the sessions. The two highest attendance percentages for teachers who identified their professional development experiences as overall effective, were at sessions where student achievement was supported and promoted (86.1%) and where teachers were encouraged to interact with each other (81.5%). The attendance percentages for participants who identified their professional development as ineffective were 75.3% and 70.6%. For both the effective and ineffective groups these offerings were attended the most often.

There is explicit language in NCLB that includes supporting improved student achievement. Teachers in DPS were interested in attending sessions that intended to have an impact on students and their academics. With the increased accountability measures being created across the country, teachers are feeling the pressure and seemingly taking steps to address this need. DPS and its teachers appear to be responding accordingly. An example of an increased accountability measure tied to student achievement is in Colorado. The recent passage of Senate Bill 191 ties 50% of a teacher's evaluation and subsequent pay to student achievement measures (yet to be determined). The agreed upon purpose of continuing to provide educational opportunities for teachers is to improve student achievement. This relationship is becoming more direct and distinct with the advent of legislation like that in Colorado. At the same time it is clearly represented in both Guskey (2000) and Mezirow's (1978) ideas.

The final level of Guskey's (2000) evaluation model is positive effects on student achievement. The previous four steps are designed to culminate in improving the metrics on standardized assessment measures. Student achievement is built into his model as the understood objective of all professional development efforts. Student achievement links to Meizrow's (1978) theory are in the manner of teachers employing what they learn in professional development as a "guide to action" (Mezirow, 1994). Potentially, teachers' practice has been changed if there is a corresponding increase in the level of their students' performance from before they engaged in professional development. Having the end goal of affecting students in the forefront of teachers' minds supports their

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learning and its transfer into individual classrooms rendering professional development activities more relevant and efficacious.

On the topic of encouraging teachers' interactions with each other, NCLB does not include this idea in its definition of effective professional development. But DPS offered and its teachers often choose sessions where dialog with their peers was encouraged. For Guskey, this would also fall in the fourth level of the model. Remembering also that the current and predominate medium for educating teachers is in groups it would be easy enough to intentionally build in time for teachers to communicate with each other. Mezirow would point to the need for adult learners to have social interaction to catalyze meaning and value from what they are learning. According to Mezirow learning is enhanced when learners actively participate in the process. Teachers conversing with each other it seems, is an aspect of identifying professional development as effective.

The attendance choice figures on the other end of the continuum are the lowest for both groups in the area of integrating the information and practices of the professional development session in to the current teacher evaluation system 33.7% for the effective group and 24.7 % for the ineffective group. NCLB makes no mention of this practice in its high quality expectation and teachers do not seem to see its value either. However, if more states follow Colorado and tie teacher remuneration to student achievement metrics, school districts may offer and teachers may choose professional development opportunities that are integrated with performance evaluations more often. For right now it seems DPS teachers chose professional development sessions that support their

students' achievement without directly considering its ties to their individual job appraisals.

NCLB does specifically delineate that scientifically based professional development practices are part of highly effective ongoing teacher education. However the legislation only cited scientifically-based practices without identifying what exactly those were. Over the last few years, scientifically based practices have centered on data collection, data analysis, and the systemic use of analyzed data for informing classroom instruction. This has been a demanding and seemingly all encompassing focus for school districts and their teachers. This top down movement has been slowly filtering into the daily practices of classroom teachers. NCLB recognizes these activities as part of highly effective professional development but it has taken awhile for it to trickle down and become a regular part of education at the building and classroom level. As scientifically based research practices are specifically named in NCLB school districts like DPS will need to find a way to increase their use in all of their professional development opportunities they provide. In DPS slightly less than half of the effective group and a third of the ineffective group chose to attend sessions where these types or kinds of professional development practices were employed. For current and future references teachers will need to know, understand and expect the activities they engage in are supported by rigorous and extensive research and are not a fad or unproven.

Finally, teachers who felt their professional development had been effective more often chose to attend sessions where classroom applications were highlighted and

important (63.4%) and where they were given time for individual reflection (54.5%). The ineffective group was 31.8% and 38.8% respectively.

NCLB states high quality professional development should be classroom focused. Teachers who felt their professional development was effective choose opportunities when there would be direct ties to their classroom instruction. In Guskey's model, the fourth level, the application of new skills and/or knowledge in individual classrooms, is the immediate predecessor to increased student achievement. Mezirow would concur. The nature of transformational learning is critical engagement with the environment, which for teachers is their classroom and their students.

Teachers also seemed to value time to reflect on what they were learning and their own practice. NCLB says nothing of this aspect, Guskey's model implicitly acknowledges it in the application phase of the continuum but Mezirow puts great value on individual think time. Learning that transforms the learner is the result of personal engagement with information. The resulting weighing, measuring, assessing and ultimately placing credence and value on the pieces and whole of what has ben presented is really what learning is. Eventually that learning must also be assigned a place in the learners overall schema or individual zeitgeist. Only then has true learning occurred.

NCLB is the national legislation all states and school districts are bound to, thus its tenants must be addressed in all professional development endeavors. Using Guskey's planning/evaluation tool casts a wide net that in many ways connects to NCLB. Mezirow's ideas of how adults best learn refocus that lens for a finer view of what is present and missing in the current professional development program. Professional

development must be designed from the purpose of increasing student achievement and then determinations made as how to best instruct their teachers to meet that goal. Mezirow's ideas hold the key for success with individual learners. Infuse these ideas with Guskey who takes a system wide view of professional development and the result is a comprehensive and insightful tool for creating an effective professional development program. The open-ended responses from teachers add further weight to the value of the above ideas.

Comments such as those below demonstrate teachers want practical ideas to use in their classrooms with their students and value the time they spend identifying these ideas and thinking them through with their professional colleagues.

They gave me strategies and techniques I can apply to my classroom

My most recent PD has been quite practical – easy to put into practice in my classroom

(Professional development is effective) When we meet as grade levels to discuss things that pertain to our grade level

I have learned new teaching strategies to use in my classroom, helps me maintain "fidelity to curriculum" by learning with my colleagues

Peers work together to help me utilize learning in my teaching

We come back and discuss as a staff what we tried and what was effective

Reflection – need time to implement strategies

I enjoy being able to share teaching strategies with my coworkers and get fresh ideas from others in my building and other buildings

I would like time to understand all the information given. I would also like more time to talk to colleagues about what we learned

Guskey's and Mezirow's ideas provide a means to encourage systematic planning for and evaluation of the effectiveness of professional development efforts for large and small school districts across the nation. An evaluation model infused with their ideas is an incredible, valuable and much needed tool in the professional development arena. A summary of the ideas above and their alignment to NCLB expectations, the wide lens of Guskey and the individual lens of Mezirow are in Table 25. This table shows the areas of agreement between NCLB, and the ideas of Guskey and Mezirow.

Table 25

Alignment between NCLB, Guskey and Mezirow

	NCLB	**Guskey**	**Meizrow**
Interactions with others was encouraged			X
Increased student achievement was promoted	X	X	
The information and practices were integrated into the teacher evaluation system			
Scientifically based professional development practices were used	X		
Classroom applications were highlighted and important	X	X	X
Participants were given time to reflect on individual applications of material			X

To continue the assessment of the DPS professional development program teachers were asked about the professional development opportunities they availed themselves of. They identified the kinds of sessions they chose to attend.

The largest attendance percentage for large-scale professional development opportunities were those provided by the district in the form of half or full day sessions

(87.1%). This kind of opportunity is not what NCLB identified as high quality because it is not ongoing and is not connected to specific classroom content. Teachers who considered their professional development expective and those who considered them ineffective attended these sessions in almost the same number (85.1% and 89.4%.)

However, district ongoing professional development opportunities that did include multiple sessions over time with connected content were chosen by 83.9% of the classroom teachers in the sample. This format was also chosen equally by teachers who were overall satisfied and those who weren't (84.2% and 83.4%).

Smaller percentages of teachers attended expert-led sessions (54.8%) or conferences (37.6%). These figures indicate teachers more often accessed shorter professional development sessions offered by district personnel rather than opportunities presented by state and national resources. Teachers in each set attended these types of sessions almost equally; expert led sessions 56.4% and 52.9%, state or national conferences 37.6% for both groups.

The data for smaller scale participation mirrors that of the large-scale figures presented above with one exception. Classroom observation and assessment by an administrator had the highest participation rating of 58%. Of these participants, 68.3% were in the overall effective category while 58.8% identified their professional development as ineffective. This difference of 9.5% is the largest gap between the two groups with regards to their professional development format choices. This data could indicate that teachers who are overall happier with their professional development experiences are more receptive to input from their principals. It makes sense that

learning and growing from educational activities increases feelings of self-competency and self-worth. Then the opinions may be heard and evaluated for their own merit.

There are two conclusions to be drawn from this data when planning professional development. The first is that the format, for participants, is not a significant deciding factor. Participants in equal measure attended all the different session types DPS offered. In most cases half of the teachers determined their overall experiences were effective and the other half categorized them as ineffective. Second, it does seem that many teachers value their administrators' thoughts on their teaching practice. Principals are striving more and more to be instructional leaders in their schools. The data suggest teachers' professional development satisfaction may impact the reception of a principal's instructional thoughts on a teacher's practice.

The principal and his or her input is part of the third level of Guskey's evaluation model. This step explores the idea of the local building's support, encouragement, advocacy, and general good will toward the new learning teachers are doing in professional development sessions, Another way of describing this is when teachers take back their fresh learning and attempt to make pedagogical changes in their classrooms - In what ways does the school and its personnel receive them?

For the teachers in the effective professional development group there was a positive but low correlation between their attitudes about learning and their thoughts on their organization' support. For teachers in the ineffective group there was no relationship. This lack of a connection could potentially be an area for DPS to improve. NCLA dictates professional development is to be on going, linked to classroom teacher

practice, intensive, and not short-term. Teachers were asked about their thoughts

regarding the ongoing level of support or engagement after they completed some of their

professional development sessions in one of the open-response questions. Many

comments can be linked to a gap in the definition of high quality professional

development with regards to formatting and to organizational support. Some of the

teachers' comments indicate DPS has work to do in this area.

> Sometimes we are required to implement items into our classrooms- usually not much support or continued learning – just a one day shot

> Sometimes things are followed up after an in service and sometimes they are not

> Once you leave the training there isn't much support provided. We do PD and then are forced, pushed, rushed into doing one small thing to show we learned & then it is dropped & on to the next

> There is a lot of ongoing assistance with the PD

> Good support from both building coaches and district personnel

Table 26 shows the data for each of the format questions the participants were asked.

Table 26

Large and small-scale professional development opportunities offered in DPS

Variable	Effective		Ineffective		X^2	*P*
	N	%	n	%		
Large scale opportunities						
College/university classes	61	60.4	50	58.8	.047	.83
Ongoing district sessions (multiple ongoing sessions and connected content)	85	84.2	71	83.5	.013	.91
District ½ or full day presentations (not ongoing)	86	85.1	76	89.4	.746	.39
Expert led presentations	57	56.4	45	52.9	.228	.63
District, state, or national conferences	38	37.6	32	37.6	.000	1.0
Small Scale Opportunities						
Participation in a PDU	67	66.3	58	68.2	.075	.78
Peer group book study	42	41.6	37	43.5	.071	.79
Classroom observations & assessment by administrators	69	68.3	50	58.8	1.80	.18
Peer classroom observations with discussion and feedback	48	47.5	37	43.5	.297	.59

   Teachers who voluntarily filled out the survey were also asked about the content

of the sessions they choose to attend. However, before they identified the content they

chose, they were first asked if the classes they attended focused on increasing their

content knowledge or increasing the effectiveness of their instructional practices. The

first question addresses gaining additional knowledge the second, the ability to apply that knowledge. They are different in both Guskey's and Mezirow's minds.

NCLB describes high quality professional development as "activities that improve and increase teacher's academic knowledge" (NCLB, 2001). The participants in this study for whom professional development was effective choose to attend sessions where they focused on increasing their content knowledge 79.2% and their pedagogy 81.2 % as opposed to the ineffective group at 70.6% and 80.0%. Teachers from both groups participated in these in sessions almost equally.

With regards to the content of the professional development offered by DPS the data is found in table 27. This table shows the comparison between the attendance figures for those who labeled their professional development as effective and for those who didn't.

Table 27

DPS professional development content

Content	Effective		Ineffective		X^2	*P*
	N	%	n	%		
Math	65	64.4	48	56.5	1.20	2.73
Science	58	57.4	48	56.5	.017	.896
Social Studies	48	47.5	39	45.9	.050	.823
Literacy	89	88.1	74	87.1	.048	.827
RtI	59	58.4	55	64.7	2.160	.340
Special education	11	10.9	10	11.8	.035	8.51
Discipline	40	39.6	32	37.6	.074	.785
Bullying	32	31.7%	19	22.4%	2.02	1.55
Data collection/analysis	54	53.5%	51	60.0%	.802	.371

There was little variation in the participation rates between the two groups. NCLB has

no specific requirements on the content of professional development on the national

level. Guskey and Mezirow likewise have no specific thoughts on content. The data show

teachers are just as likely to be happy with the content as unhappy. The open –ended

response questions confirm this. A few of the teachers' comments are below.

> Professional development has helped me learn new ways of teaching the
> curriculum that allow me to expand my practices in the classroom

> I am continuing my education and it helps to understand the new content expected

> Pd has provided knowledge (or more) about learning strategies, etc…

> Pd has offered me insight into new curriculum and instructional strategies

The PD has taught me about the various curriculum taught to students in
        thedistrict

It has helped me learn the district's curriculum

Most pd revolves around learning new curriculum or content

Viewing this substantial data through the lenses provided by Guskey and

Mezirow, DPS can make meaningful changes with regards to the process of professional

development and to a lesser degree the format. Process is how the ongoing education of

teachers actually takes place. In this area both those who felt their experiences were

effective and ineffective had much to say that can guide the district in improving the

overall quality of their professional development program. With regards to the formatting

of professional development activities, DPS must strive for a tighter alignment between

their offerings and the NCLB definition of high quality of professional development.

Additionally DPS has much work to do in the area of organizational support.Table 25

provides a summary of the varied professional development sessions offered by content.

Research questions 4 and 5 were complements of each other and explored the

attitudes about learning of the participants in both the effective and the ineffective group.

Questions investigating these constructs were aimed and trying to identify the

perceptions, feelings and underlying values of teachers who felt positive about

professional development as well as those who didn't. An understanding of teachers'

motivations, values, and perceptions could do much to inform professional development

and ultimately to improve it. Elementary schools are about the business of educating

students, but the culture of the buildings in which they do so is understandably influenced

by the attitudes, beliefs, perceptions and values of the individuals who work there.

This survey showed teachers value their own opinions and assessments of their teaching practice. They want to do well in the classroom and to help their students succeed. They seem to recognize when their practice has qualitatively improved and their students have been positively affected. They choose to attend professional development opportunities that will make differences in these areas. These teachers are intrinsically motivated to do their job well.

The data also indicate they do not place importance on outside recognition for their efforts or seek out professional development that will impact their performance evaluations. These teachers do not value outside accolades – they want positive recognition of their actions and but appreciate this more when it comes from themselves. In other words, their own constructive self-assessment of their teaching is more meaningful to them than that of someone else, like a principal or other supervisor. The question is how do you support individuals who want to be successful with their students, are pleased when they are, attend professional development sessions that help them extend and improved their practice which helps them perform better in their classroom, which in turn pleases them…? How do you support and positively affect this self-perpetuating cycle? Guskey's wide lens offers some answers, Mezirow's individual lens offers even more.

For these teachers professional development is effective when they learn practical strategies (97%), become more effective as teachers (96.1%) and when their teaching itself is more effective and productive (95.1%). These ideas are embedded in the fourth level of Guskey's professional development evaluation model. For these teachers

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applications to the classroom are of paramount importance. In addition to the head knowledge they gain at the second level they are looking for ways to relate that information to their specific teaching context. This piece of true learning is critical for these teachers and for the success of their students, as one is predicated on the other. Attendance at professional development sessions where there is no direct link to individual classroom or no time allotted for teachers to make their own connections seems to be less valuable to teachers and what they determine as ineffective.

Here is the tie to Mezirow and his transformational learning ideas. The three major tenets of his theory applicable to adult learners in professional development settings are; a) the emphasis in learning is about changing how an individual thinks about things rather than changing the amount of knowledge an individual processes (qualitative knowledge rather than quantitative knowledge): b) learning includes cognitive, affective, interpersonal and moral aspects that involve a learner's existing knowledge and background as well as their ability to examine their own learning processes (personal context and reflection are important): c) learner's ways' of knowing, their frames of reference, are impacted when individuals are fully engaged in their own learning through reflection and dialogue (meaning constructed through both individual reflection and social interaction can further serve to guide future behavior). These factors are effective as they interface with each other encouraging learners to build upon, reinterpret and consider the implications and applications of their own current learning experiences and teaching context.

A concise summary of the above information, tied to the data gathered in this study, highlights three important pieces for professional development designers to keep in mind.

Teachers want more than just knowledge from their professional development they want connections to themselves and to their students.

Teachers value time to make and build those bridges and to integrate their new learning into their existing schema.

Teachers need time to involve themselves in their learning and hash out personal applications through talking with colleagues and using personal reflection time.

These ideas also surfaced in the data on the processes of professional development sessions and what teachers who identified their professional development as effective choose to attend.

Additionally, there were positive correlations between the attitudes about learning for the teachers who felt their experiences were effective and Guskey's levels of learning, learning application, and student achievement. These positive relationships echo teachers sentiments that they value the learning that happens in professional development sessions and the application of that learning with their students in their classrooms. The continued success of their students, the ultimate goal of helping teachers to continue developing their knowledge and skill base, is probably one reason these teachers are motivated to attend ongoing professional development.

Much time is spent on preparing continuing education opportunities for teachers. It seems the outcomes from this planning would be augmented if this phase also included time for teachers to talk with their colleagues and to personally reflect on what they are learning and what it means to them, and if direct applications were made to classroom

practice and pedagogy or if time was provided for teachers to make these connections on

their own.   DPS needs to plan instruction and activities that promote these ideas as part

of each of their professional development sessions. Teachers in their open-ended

responses concur.

> It keeps me informed on new practices in the field, gives me an opportunity to
> connect with other colleagues

> Helped me to become a better teacher by learning from more experienced teachers

> I've used many new ideas that I've learned from other teachers-much of what I
> learn in pd's is from other teachers not just the instructor

> By trying different techniques taught to us and making any tweaks needed for me
> and my kids

> Pd gives me the structure need to teach. With that structure then I can mold it to
> my teaching style

> Professional development has helped me learn new ways of teaching the
> curriculum that allow me to expand my practices in the classroom

Teachers who considered their professional development effective made these

comments. But a large portion of the sample (45.7%) was not pleased with their

educational experiences. Further examination of their thoughts can also yield ideas for

improving the overall DPS program as well. Teachers in this group mirrored their

counterparts in what they valued in professional development – but to a lesser degree.

 Like their colleagues, they valued professional development when they learned

practical teaching strategies and when they were proud of themselves. This again speaks

to the internal wirings of teachers indicating they want to do well in their classroom and

have expectations for themselves to do so. Mezirow's and Guskey's ideas are also

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applicable to these educators. But Guskey's evaluation model is organized as a hierarchy and success at the higher levels is predicated on success at the beginning levels.

The first step for Guskey is teachers' initial satisfaction with the professional development experience. The teachers in this group indicated that overall they found little value in and were generally not pleased with their experiences. At this basic level changes are easy to make by taking into account the physical environment of the professional development location. Pay attention to the details such as having enough chairs, providing refreshments, and possibly supplying handouts.

The second level addresses the participants' actual learning. The question to be asked and answered here is did the attendees gain the knowledge or skills that were intended? Success at this level requires knowledgeable presenters that are engaging and dynamic. In short, teachers also need good teachers if they are to learn what is expected. It is important here to note that good teachers of children do not automatically make good teachers of adults. The education of adult learners requires a different skill set that elementary teachers by training may or may not possess. Leaders in charge of identifying and securing presenters for the professional development of teachers should be aware of the differences in pedagogy necessary for elementary students versus those necessary for the teachers of elementary students. The effectiveness of the educational experience is intimately tied to making a good choice in a knowledgeable and capable presenter. Success in the first step of participation and the next step of learning are the foundations of the evaluation model.

These two levels can be assessed immediately. Participants are asked at the culmination of the experience if they enjoyed themselves and if they learned anything. Evaluation here is easy and quick and necessary changes can be made for the immediate upcoming professional development sessions. But again satisfaction must be evident at these two introductory levels if the ultimate goal of increased student achievement is to be realized.

The next two steps in the professional development evaluation model are organizational support and the application by teachers of what they learned. Teachers who determined their professional development experiences had not be effective offered several insights on these two levels as to their dissatisfaction. Some of their comments are below.

I don't feel supported by district personnel

Don't feel supported necessarily

I do not feel supported because there's not enough time or a follow up in class. I am supported with materials

I have learned new strategies for teaching but little has been done to connect the curriculum

Usually not much goes back to the classroom due to lack of time and support to implement something new

I have used much that I learned in pd's in the past but very little in the last three years has been about instruction in the classroom

Year in and year out we are given pd that we cannot really use in the class

It is clear that DPS has much to do in these two areas. The district as a whole must address its lack of support connected to the training they provide. These teachers obviously did not feel supported by the district at large or by the individual

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administrators, coaches or facilitators present in their schools. If money is provided to

offer training for teachers and teachers are paid to attend then it follows that funds must

also be allotted to help individual buildings support their employees in the

implementation of the ideas they are learning. DPS is at least one step short in terms of

organizational support. Lastly, just as the teachers in first group that considered their

professional development as overall effective could benefit from an increased focus on

personal application and transformative learning so might the teachers in this group.

     The data also indicate that what doesn't motivate the teachers in either group is

impacting their annual performance evaluations and being recognized for their efforts.

This finding is interesting considering the growing number of school districts currently

seeking to use or create a pay for performance or merit pay systems for their teachers.

Nationwide the numbers are between 3-5% of the total number of school districts, about

500 out of 14,000 (Greene & Buck; 2011). However, DPS will be piloting a merit pay

system for the 2011-2012 school year. The district wide plan is to evaluate all classroom

teachers multiple times in one year by an administrator and a peer. They will in turn

provide feedback inside a short period of time with a goal of improving instruction.

     In sum, one avenue for DPS to improve its efforts in crafting effective

professional development experiences is to refocus on the successful implementation of

levels 1- 4 of Guskey's evaluation model. If this is done with specific attention to level

four and the inclusion of Mezirow's ideas of transformation learning, DPS can increase

the number of teachers who have overall effective experiences.

Certainly these actions can aid in improving the professional development program of DPS and possibly other local school districts as well. Intentional and informed changes are critical to the success of any program and good leaders must take action when provided with information that could potentially advance their efforts. But a comparison of the two groups of teachers shows that overall the teachers who identified their professional development as effective were generally just more positive and happy. A reasonable conclusion to be drawn is that regardless of any substantive changes made that may or may not have been informed by detailed program evaluations - some teachers will still consider their experiences as unhelpful to them and thus ineffective.

While 100% satisfaction is an unrealistic goal for any endeavor currently only 54.3% of DPS's teachers labeled their professional development as effective, leaving lots of room for genuine improvement. The first credible steps to be taken towards increased effectiveness are suggested in paragraphs above. But there are other resources available to school districts that may address deeper character issues present at individual building sites that are inhibiting professional development from being its most effective. School buildings are where teachers practice the art and science of teaching and where often the unspoken or unidentified ethos or culture of the school impedes transformative learning connected to professional developing opportunities.

Three, of many potential suggestions to address this issue such as Killion and Roy's ideas on collaborative professional learning, Bryk and Schneider's work on building trust in schools and Fierce Conversations by Susan Scott and are outlined below.

In 2009 the National Staff Development Council, now called Learning Forward, published a book called <u>Becoming A Learning School.</u> Understanding that professional development is in need of improvement, the authors Joellen Killion and Patricia Roy suggest collaboration in professional development as the key to increasing its effectiveness. The book and its plethora of ideas intend to serve as a resource guide for those who design, implement and otherwise provide professional development to teachers. Their thinking is based on understanding that teachers learn best when their specific content and classroom are the focus of training and when they are part of a group that is developing school wide capacity rather than only individual knowledge and skill sets.

Collaborative professional development may be one strategy that could potentially affect the less happy participants of professional development in a positive manner. This is possible because of its real time focus and because these less satisfied teachers will now be face to face with other colleagues who may hold a different set of more optimistic attitudes about learning. Planning intentional interaction between all participants, engaging them in activities designed to collectively improve teaching and learning can potentially result in higher levels of satisfaction for all. Personal application of learning is part of Guskey's evaluation tool and a mainstay of Mezirow's theory of transformative learning. These ideas may help local sites improve teachers' feelings about learning and increase their general satisfaction with the professional development they experience. Teachers from this sample offered the thoughts below. It is possible collaborative professional learning may address some of the concerns they site because it

is focused tightly on specific building issues and individual teachers, classrooms and students as members of a collective learning community.

> In recent years pd has been a frustrating waste of time for me. I have been required to sit through many hours of information that has no relation to my age group or needs of my class

> Deadlines are imposed and I spend planning time on paperwork rather than planning for instruction

> Sometimes we go to a pd and we have no time to implement in the classroom the knowledge because nobody on the teams wants to implement

> I've taken 10 PD classes this summer. The only one that was worthwhile was the kinder math class because we had time to look at the curriculum and plan

A second resource likely to improve the climate and culture in individual buildings is Bryk and Schneider's extensive work on creating trust in schools. These researchers contend that schools with high levels of trust and community are more likely to have higher student achievement scores than schools that struggle with collegial relationships (Bryk & Schneider 2002). Relational trust, which includes respect, competence, personal regard, and integrity, is their term for healthy and positive collegial interactions. Schools that have high measures of trust are more likely, according to their research, to embrace pedagogical changes that precipitate increases in student achievement. Buildings that have a large percentage of teachers who are dissatisfied with their current involvements with professional development may benefit from backing up and working first on their relationships with their coworkers and supervisors. A positive foundation here may lead to greater gains in knowledge, skill and application gleaned from on-going educational experiences. From the comments below improved collegial

relationships may indeed be needed to help teachers get more out of their professional

development experiences.

> The pd @ school by facilitator has been demoralizing and useless

> When I began teaching, I could not BELIEVE the amount of time dedicated to this worthless practice. I had no time to plan and my students suffered

> I feel like PD doesn't contribute to my skills

> There is no feedback in this building at all. Although I come back willing and eager to share my PD experiences my good intentions are ignored

> Year in and out we are given PD that we cannot really use in the class

It is conceivable that even after large-scale, insightful changes to a professional

development program, intentionally planned collaborative educational experiences and

intensive work on relationships at the site level, that some or many teachers will still be

displeased. Susan Scott's writings on Fierce Conversations and more specifically fierce

in the schools (fits) may provide principals, facilitators, coaches and colleagues the

means to address the negative and unproductive attitudes of coworkers in their work

place.

Ultimately, if numerous changes are made regarding the plan, design, and

implementation of professional development, and intermediary actions address the

climate, culture and collegial relationships in local buildings with minimal effect on this

groups of teachers- then the last place to intervene is with the impenetrable attitude of

these individual teachers themselves. Ms. Scott presents ideas in her book that she

intends to, provoke learning, tackle tough challenges and enrich relationships. Teachers,

who feel that all the efforts on their behalf to create effective professional development

have been and are still for naught, may need to be confronted with the notion that the

problem may indeed be them. Personal accountability, investment and professionalism

from each individual present in training activities leads naturally to Guskey's level of

learning application and to Mezirow belief that true learning causes a change in the

learner. If a teacher can't get to the application level or to a deeper understanding of

learning, when their district and school has done a lot of things right, they may need to be

challenged as to the fit of the profession they have chosen. Either the individual or the

job can be changed to ensure a better match – but a choice is needed. <u>Fierce</u>

<u>Conversations</u> may be a final tool that provides direction for this tough but necessary

confrontation. In the big picture, for these individual teachers, the effectiveness of

professional development hangs in the balance. Some of the comments below seem to

indicate an overall attitude adjustment may be helpful.

> I honestly can say that the time wasted in PD is astronomical; teachers as a whole hate it and find it worthless
>
> My biggest concern is the tunnel vision teaching of all students and the lack of creativity for which we were previously recognized. There is a huge amount of time putting students in testing situations and gathering data at the cost of removing them from school. Students are getting burned out and no one is listening
>
> I can summarize in a sentence: to me pd's are unrealistic, not connected with each other subjects (literacy, math) especially those about science and SS. I see those days more a justification of somebody "selling" something than actually worried about students. But of course "on behalf of the kids" everything is ok. Summer developments are expensive for the district and ineffective
>
> Unfortunately, district level pd has not been very engaging for me. Nothing cutting edge and way too long.
>
> I have never seen a district correlation between PD and student achievement

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The three resources suggested above are by no means exhaustive. They merely represent the wide array of other means school districts and individual buildings may have at their disposal. Given the NCLB professional development mandate and the vast amounts of money and time devoted to these efforts by states and local school districts, it is incumbent on education to use every asset to its fullest extent for the benefit of all students.

Study Limitations

This study has five primary limitations. The first is that the investigation focused only on one urban school district. More studies of its kind need to be conducted across the nation to add substance to the value of using this particular evaluation tool. DPS is a large district that serves a sizable percentage of students of color and of second language learners. It's results could be potentially be extrapolated to other locales of similar demographics. However, many more investigations across all types and configurations and settings would lend credibility to these findings.

A second limitation is that this study only included data from elementary school classroom teachers. The constraint of only classroom teachers was intentionally part of the investigation due to the vastly different ways teachers who have their own self-contained classrooms and specialists receive their professional development in DPS. Specialists such as social workers, physiologist, speech therapist etc… are offered training by their respective departments specific to the positions they fulfill. Their individual specialty supervisors are responsible for designing, conducting and evaluating the training these individuals receive. Because of the number of individuals requiring

these specific skills, this kind of training is done on a limited scale and affects a small sub group of individuals. Likewise the specific training physical education, music, art, dance and library teachers receive is also conducted by individuals with specific content knowledge for those disciplines and typically separate from the training classroom teachers are offered.

Additionally, this inquiry also restricted the sample to only elementary school teachers. DPS is a large district able to offer different professional development options for different types of teachers. For example, elementary school teachers are often presented with classes such as; Guided Reading, The Writing Workshop Model or Response to Intervention Strategies. Middle and High school teachers have content and often class specific needs. They are math teachers of algebra or geometry, or science teachers of biology or chemistry. The structure within their specific buildings is also different. Department chairs or lead teachers can potentially provide organizational support not typically found in most elementary schools. Therefore, this research can only suggest improvements for the professional development of elementary classroom teachers. Findings cannot be applied to their colleagues in middle or high school or to those who serve in positions other than those of a self-contained, regular education, classroom teacher.

The responding participants in this study were also primarily white, females. Thus the findings may not be transferable to other school districts whose populations reflect more diversity with regard to gender and ethnicity. A corollary to this is the need for more research to done investigating the possible impact gender, race and ethnicity may

have on teachers' attitudes about learning and the five constructs of Guskey's model examined here.

Last, this study explored the actual program happenings of a large, urban, school district, the attitudes of teachers who felt overall positive regarding their professional development experiences and those who didn't. The relationships between the five constructs of Guskey's evaluation model and the teachers' attitudes and beliefs were examined but no directionality or causality was investigated or can be identified.

Recommendations

If DPS is to learn from this study and take steps to improve the effectiveness of the on going education of teachers in their district based on the data collected herein, the following recommendations should be addressed

> The process of professional development sessions is crucial to participants' perceptions of its effectiveness. DPS needs to intentionally create time for participants to talk with each other and make personal connections and applications to what they are learning.

> The format of professional development sessions is not crucial to participants' perceptions of its effectiveness. However DPS does need to keep in mind NCLB expectations of high quality professional development and to work towards more and stronger organizational supports of teachers' learning.

> The content of professional development sessions is not crucial to participants' perceptions of its effectiveness, but should reflect instruction on district specific curriculum requirements or new state content expectations.

> Teachers who labeled their professional development as effective could benefit from a more intentional use of Guskey's ideas of personal application and Mezirow's ideas of transformational learning.

> Teachers who labeled their professional development as ineffective could benefit from an examination of the district's professional development activities from the basic levels of participation, learning, and organizational support.

Individual school sites may need to devote time to developing positive climates in their buildings that in turn support professional development efforts.

At the district level DPS could gain much from the development, training and on-going support of effective teachers who desire to educate their peers. A district maintained cadre of professional adult educators with corresponding classroom experience would be a valuable asset.

States and school districts across the country must plan for and evaluate all on-going professional development opportunities for educators with both quantitative and qualitative indicators in mind.

Future Research

This evaluation of the professional development program of a large urban school district should only be the beginning of evaluations conduced across the country. More research of this kind from various states and school districts with different demographics will inform the enterprise that is professional development and move it towards greater effectiveness. Further research also needs to be done in the area of causality. What steps, strategies, designs, and actions in professional development actually precipitate a corresponding increase in teacher effectiveness? Specific, detailed, and contextualized answers about the direct links between the teaching and learning of educators in professional development activities are urgently needed. Last, it is crucial to investigate how to improve the climate and culture of individual elementary schools so that professional development is sown on fertile ground.

Final Thoughts

The strengths and gaps illuminated this study can serve to guide DPS in designing and implementing a professional development program that meets more of its teachers' needs and in turn positively affects student achievement. Precipitating an increase in the success rates of students on multiple measures is the ultimate goal of all ongoing teacher

education. No Child Left Behind legislation outlines broad expectations for teachers and for their students. States and local school districts charged with meeting these guidelines and providing professional development to a vast array of teachers for an even wider range of subjects and grade levels are in desperate need of a planning and evaluation tool to help them accomplish their task. This inquiry proposes such a tool and demonstrates the valuable and insightful information gleaned from its use. The preponderance of time and money spent on these endeavors necessitates a stark look at their effectiveness on all grounds – fiscal, moral, and professional.

On a professional note, this researcher would be most pleased with my district's efforts to systematically improve the quality of the professional development I attend. As a veteran teacher I still seek new information, strategies and skills that I can take back to my classroom and use to the benefit of my students. "When Educators Learn, Students Learn (Killion & Hirsch; 2009). Improved and consistent quality of the educational opportunities I avail myself of would be professionally welcomed and ardently desired.

Personally, to be presented with information and ideas relevant to my grade level and classroom, to be given opportunities to connect with my colleagues and discuss with them the meaning we see in the material before us, to be granted time to sift and sort the value of what I am learning and to make connections to my own background and experiences, values and beliefs – would be a gift of incalculable measure.

I began this study out of my own frustrations with my professional development experiences and because I am now in the position of providing trainings for my coworkers. I desire high quality experiences for myself and for my colleagues. My hope

is that DPS will use these ideas and tools to improve professional development in the district. But regardless of their future choices, this investigation has transformed and will inform my practice as an adult educator of educators.

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Appendix A

NSDC's Standards for Staff Development

(Revised, 2001)
Context Standards

Staff development that improves the learning of all students:

- Organizes adults into learning communities whose goals are aligned with those of the school and district. (Learning Communities)
- Requires skillful school and district leaders who guide continuous instructional improvement. (Leadership)
- Requires resources to support adult learning and collaboration. (Resources)

Process Standards

Staff development that improves the learning of all students:

- Uses disaggregated student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement. (Data-Driven)
- Uses multiple sources of information to guide improvement and demonstrate its impact. (Evaluation)
- Prepares educators to apply research to decision making. (Research-Based)
- Uses learning strategies appropriate to the intended goal. (Design)
- Applies knowledge about human learning and change. (Learning)
- Provides educators with the knowledge and skills to collaborate. (Collaboration)

Content Standards

Staff development that improves the learning of all students:

- Prepares educators to understand and appreciate all students, create safe, orderly and supportive learning environments, and hold high expectations for their academic achievement. (Equity)
- 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. (Quality Teaching)
- Provides educators with knowledge and skills to involve families and other stakeholders appropriately. (Family Involvement)

Appendix B

The Regional Educational Laboratories

Kentucky, Tennessee, Virginia, & West Virginia

Contractor:
The CNA Corporation
4825 Mark Center Drive
Alexandria, VA 22311
703-824-2828 (1-800-344-0007 x2828)
RELAppalachia@cna.org
http://www.cna.org/

- -

REL Central
Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota, & Wyoming

Contractor:
Mid-Continent Research for Education and Learning
4601 DTC Boulevard, Suite 500
Denver, CO 80237
303-337-0990
relcentral@mcrel.org
http://mcrel.org/

REL Mid-Atlantic
Delaware, Maryland, New Jersey, Pennsylvania, & Washington, DC

Contractor:
The Pennsylvania State University
277 Chambers Building
University Park, PA 16802
1-866-RELMAFYI
info@relmid-atlantic.org

REL Midwest
Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, & Wisconsin

Contractor:
REL Midwest at Learning Point Associates
1120 East Diehl Road
Naperville, IL 60563
866-730-6735
relmidwest@learningpt.org
http://www.learningpt.org

[REL Northeast and Islands](#)
Connecticut, Maine, Massachusetts, New Hampshire, New York, Puerto Rico, Rhode Island,
Vermont, & the Virgin Islands

Contractor:
REL Northeast & Islands at Education Development Center, Inc.
55 Chapel Street
Newton, MA 02458
(617) 618-2747
jweber@edc.org
http://www.edc.org

[REL Northwest](#)
Alaska, Idaho, Montana, Oregon, & Washington

Contractor:
REL Northwest at Northwest Regional Educational Laboratory
101 SW Main, Suite 500
Portland, OR 97204
800-547-6339, ext. 486 or 454
info@NWREL.org
http://www.nwrel.org

[REL Pacific](#)
American Samoa, Federated States of Micronesia, Guam, Hawaii, Northern Mariana Islands,
Republic of the Marshall Islands, & Republic of Palau

Contractor:
REL Pacific at Pacific Resources for Education and Learning
900 Fort Street Mall, Suite 1300
Honolulu, HI 96813
(800) 377-4773
burniskj@prel.org
http://www.prel.org

[REL Southeast](#)
Alabama, Florida, Georgia, Mississippi, North Carolina, & South Carolina

Contractor:
REL Southeast at SERVE Center University of North Carolina at Greensboro
Gateway University Research Park
5900 Summit Ave.
Browns Summit, NC 27214
800-755-3277
RELSoutheast@serve.org
http://www.serve.org/

REL Southwest
Arkansas, Louisiana, New Mexico, Oklahoma, & Texas

Contractor:
REL Southwest at Edvance Research, Inc.
9901 1H-10 West, Suite 700
San Antonio, TX 78230
1-877-EDVANCE (338-2623)
technical_assistance@edvanceresearch.com
http://www.edvanceresearch.com

REL West
Arizona, California, Nevada, & Utah

Contractor:
REL West at WestEd
730 Harrison Street
San Francisco, CA 94107
866-853-1831
relwest@wested.org
http://www.wested.org/

Appendix C

Pre and Post Survey Examples

<u>Pre Survey</u>

<u>Interventions</u>
Presenter:

Please take a moment to complete this brief self-assessment by circling the number that corresponds your knowledge in these areas.

A. Types of interventions
  0- no clue
  1- heard of it
  2- understand it
  3- can apply it
  4- can explain it
  5- can teach it
  6- can evaluate it

B. Interventions appropriate for English Language Learners
  0- no clue
  1- heard of it
  2- understand it
  3- can apply it
  4- can explain it
  5- can teach it
  6- can evaluate it

C. Student factors that impact effectiveness of interventions
  0- no clue
  1- heard of it
  2- understand it
  3- can apply it
  4- can explain it
  5- can teach it
  6- can evaluate it

D. Teacher factors that impact effectiveness of interventions
  0- no clue
  1- heard of it
  2- understand it
  3- can apply it
  4- can explain it
  5- can teach it
  6- can evaluate it

E.   Cultural/family factors that impact effectiveness of interventions
  0- no clue
  1- heard of it
  2- understand it
  3- can apply it
  4- can explain it
  5- can teach it
  6- can evaluate it

<u>Interventions</u>
Presenter:

Please take a moment to complete this brief self-assessment by circling the number that
corresponds your knowledge in these areas.

A. Types of interventions
        0- no clue
        1- heard of it
        2- understand it
        3- can apply it
        4- can explain it
        5- can teach it
        6- can evaluate it

B. Interventions appropriate for English Language Learners
        0- no clue
        1- heard of it
        2- understand it
        3- can apply it
        4- can explain it
        5- can teach it
        6- can evaluate it

C. Student factors that impact effectiveness of interventions
        0- no clue
        1- heard of it
        2- understand it
        3- can apply it
        4- can explain it
        5- can teach it
        6- can evaluate it

D. Teacher factors that impact effectiveness of interventions
        0- no clue
        1- heard of it
        2- understand it
        3- can apply it
        4- can explain it
        5- can teach it
        6- can evaluate it

E. Cultural/family factors that impact effectiveness of interventions
        0- no clue
        1- heard of it
        2- understand it
        3- can apply it
        4- can explain it
        5- can teach it
        6- can evaluate it

Appendix D

Guskey's Professional Development Evaluation

Five Critical Levels of Professional Development Evaluation (Guskey. 2000)

Evaluation Level	What Questions Addressed?	What is Measured or Assessed?	How Will the Information Be Used
Participants' reactions	Did they like it? Was their time spent well? Did the material make sense? Will it be useful? Was the leader knowledgeable and helpful? Were the refreshments fresh and tasty? Was the room the right temperature Were the chairs comfortable?	Initial satisfaction with the experience?	To improve program design and delivery.
Participants' learning	Did participants acquire the intended knowledge and skills?	New knowledge and skills of participants.	To improve program, content, format, and organization.
Organizational Support	What was the impact on the organization? Did it affect organizational climate and procedures? Was implementation advocated, facilitated, and supported? Was the support public and overt? Were problems addressed quickly and efficiently? Were sufficient resources made available? Were successes recognized and shared	The organization's advocacy, support. Accommodations, facilitation and recognition.	To document and improve organizational support.
Participants use of new knowledge and skills.	Did participants effectively apply the new knowledge and skills?	Degree and quality of implementation. To document and improve the implementation of program content.	

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Evaluation Level	What Questions Addressed?	What is Measured or Assessed?	How Will the Information Be Used
Student Achievement	What was the impact on students? Did it affect student performance and achievement? Did it influence students' physical or emotional wellbeing? Are students more confident as learners? Is attendance improving? Are dropouts decreasing?	Student learning outcomes: -Cognitive (performance and achievement) -Affective (attitudes and dispositions) -Psychomotor (skills and behaviors)	To demonstrate the overall impact of professional development

Appendix E

E-mail request to Principals

Dear _____,

      My name is Leslie Stahl and I am currently serving as a facilitator at _____ Elementary. I am also in my fifth year of the Higher Education Doctoral program at the University of _____. I have finished the course for the program and am now ready to collect data for my own dissertation research. My focus is on transformative professional development experiences for educators.

      The data for my dissertation will be gathered via a survey regarding teachers' perceptions of the professional development opportunities they have participated in through the _____ Pubic Schools. To that end I am asking for time to discuss my work with your faculty and enlist their help by filling out a 54 question survey. I hope to do this in a 30 – 40 minute meeting at your school during the months of October, November or early December. I will bring light breakfast refreshments, explain my purpose, hand out the survey and collect the competed paper work all that morning.

      I am asking you to request the presence of your faculty at an agreed upon time and date, put it on your calendar and to let me address the whole group. The time needed to thoughtfully complete the survey is more than a guest would typically be granted at faculty meeting or other meeting. Thus, any morning not dedicated to data, intervention or faculty meetings would be preferable. That is a choice I leave up to you.

      I realize giving me a morning in a busy fall schedule is a large request. I have been granted permission by the DPS research and assessment office to gather this data within the district. I will of course share my results with the district at large and with you individually if you so desire.

      Please review your schedule a select three potential dates for my visit. I am attempting to collect data from seventeen schools in all. The completed list of hopeful sample schools is contained in an attachment to this request. The schools are balanced, across geographical regions, networks and school-performance ratings. If you have any questions please feel free to contact me either at _____or on my cell _____

Sincerely,
Leslie

Leslie Stahl
_____ Elementary
Facilitator
_____ Drive

Appendix F

Researcher's Script

Good morning and thank each you for coming. My name is Leslie Stahl and I am currently a facilitator at _____ Elementary.

I am also currently enrolled in the PhD Higher Education program at DU. I have finished my course work and am now gathering data for the final leg of that journey – my own dissertation.

To that end I am here this morning and asking for about 20 minutes of your time. If you are a classroom teacher I would like to know about your perceptions, thoughts and experiences regarding the professional development opportunities you have participated in offered by DPS.

I have been at Maxwell for last two years. I began my teaching career in DPS at _____ Elementary in an ELA-E classroom for three years. From there I went to teach at _____ Elementary for two years and _____ for three. I spent seven years in the classroom at _____ Elementary before accepting the facilitator position at _____.

Through out my teaching career in DPS I have continued my education, as most of us do, completing my Master's degree in bilingual education in 1996 and National Board Certification in 2001.

All of this leads up to now and to my latest project. I am collecting data from the classroom teachers of 17 elementary ECE- 5th or 6th grade schools across DPS.

To do so I am asking you respond, in writing, to 55 multiple-choice questions. For the majority of the questions, 43 in all, you have the choice of five answers on a scale from strongly agree to strongly disagree. Your answers are anonymous. The only identifying information on each of the surveys is the specific number of this school. Please enjoy the food I brought as part of my thank you to you and take the next 15 -20 minutes this morning to complete the survey. Place your completed survey in the brown envelope with your school number on the front.

While I know it might be difficult with some of the questions please -

- be sure to answer every question (treat it a little like CSAP and touch every question)
- use only the answer choices provided (If you struggle with marking a specific response please choose your best answer and write your thoughts in the margin next to the troublesome question).

I thank you in advance for your time and for helping me to finish my work in the PhD program at DU.

I plan is to share the final report with school principals in the spring of 2010 either individually or collectively.
Again, I thank you for your time this morning.

*For those teachers who need or want more time to complete the survey or who might have be absent and are still willing to participate an envelope will be left with the school secretary and mailed to me at _____ Elementary in two days.

Appendix G

Professional Development Questionnaire
Dunbar Public School
Fall 2009

Section 1

Please tell me about yourself:
Gender
☐Male ☐Female

Age
☐ 20-25 ☐ 26-30 ☐31-35 ☐36-40 ☐41-45 ☐45-50 ☐50+

Ethnicity
☐ American Indian or   ☐Asian or   ☐Black (Not of   ☐   ☐ White (Not of
Alaskan Native   Pacific Islander   Hispanic Origin)   Hispanic   Hispanic Origin)

Level of Education
☐Bachelor's ☐Bachelor's + ☐Masters ☐Maters + ☐Doctorate

Total number of Years Teaching (including this year)
☐1-3 ☐4-9 ☐10-14 ☐15-19 ☐20-24 ☐25-29 ☐30+

Total number of years in DPS (including this year)
☐1-3 ☐4-9 ☐10-14 ☐15-19 ☐20-24 ☐25-29 ☐30+

Grade Level Currently Teaching (check all that apply)
☐ECE ☐Kinder ☐1st ☐2nd ☐3rd ☐4th ☐5th

OR are you a Special Ed Teacher_____ Interventionist_____ Reading Specialist_____
Specials Teacher_____   Other_____(please say what)

Are you now or have you ever been enrolled in an alternative teaching license program?
☐Yes ☐No

Professional Development Process

1. I am aware of the goals of my district's professional development plan.
☐ Yes
☐ No
☐ Not sure

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

3. I am aware of my school's improvement plan.
☐ Yes
☐ No
☐ Not sure

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4. My school's improvement plan is linked to overall school improvement and increased student achievement.
☐ Yes
☐ No
☐ Not sure

5. Professional development in my district is offered: (check all that apply)
☐ during the school day   ☐ during the summer
☐ before and/or after school   ☐ on my lunch hour
☐ on assessment or alternative schedule days   ☐ on weekends
☐ at the end of the school year (after school closes in) ☐ in the evenings
☐ at the beginning of the school year (before school starts) ☐ other

6. Who decides the content of the professional development in your district?
☐ District Level Personnel
☐ Instructional Network Personnel
☐ Building/School Level Personnel
☐ Professional Development Committee
☐ Teachers
☐ Combination
☐ Other_____

7. Taken as a whole, do you consider your professional development experiences to be overall
____ effective.   ____ ineffective.   ____ unsure

Please tell me more about your experiences.
What kinds of professional development did you participate in? (check all that apply)
Large Scale Opportunities
☐ college/university graduate classes
☐ district ongoing professional development (multiple ongoing sessions with connected content)
☐ district ½ day or full day presentations/workshops (not ongoing
☐ expert led presentations/lectures
☐ district, state or national conferences

Smaller Scale opportunities
☐ participation in a PDU
☐ peer group book study
☐ classroom observation and assessment (by administrators)
☐ peer classroom observations with discussion/feedback

How was your professional development implemented? (check all that apply)
☐ interaction with other participants was encouraged
☐ increased student achievement was promoted/supported
☐ the information and practices were integrated into the teacher evaluation system
☐ scientifically based professional development practices were used
☐ classroom applications were highlighted and important
☐ participants were given time to reflect on individual application of material

What was your professional development about? (check all that apply)
☐ Generally increasing participants content knowledge
☐ Generally increasing participants understandings of effective instructional practices

☐ math   ☐ special education

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☐science ☐ discipline
☐social studies ☐bullying
☐literacy ☐data collection/analysis
☐RtI ☐other_____

Section 2

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

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

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

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

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

Statement: As a result of professional development, my attitudes and beliefs about teaching and learning change when:	Strongly Agree	Agree	No Opinion	Disagree	Strongly Agree
36. The experience was meaningful to me					
37. I learned practical instructional strategies					
38. My teaching becomes more effective					
39. I am more effective or productive as a teacher					
40. I've enjoyed the experience					
41. I've become empowered in new ways					
42. I have learned to meet the various needs of all of my students					
43. It has a positive impact on student					

behavior					
44. My students become more actively engaged in learning					
45. I can see positive impact on student achievement					
46. It impacts my annual performance					
47. I receive positive feedback from my supervisor					
48. My efforts are recognized					
49. I feel proud of my accomplishments					
50. It connects to district needs and overall school improvement					

51. In what ways have your professional development experiences contributed to your knowledge and skill base?

_____
_____
_____
_____

52. How does your school support what you learn in your professional development sessions?

_____
_____
_____
_____

53. How have you used what you learn in professional development opportunities in your classroom with your students?

_____
_____
_____
_____

54. In what ways has your professional development affected your students' achievement?

_____
_____
_____
_____