Summer 5-15-2017

A Case Study of the Implementation and Impact of the System for Teacher and Student Achievement (TAP)

Tyrone D. Burton
tyrone.burton@student.shu.edu

A Case Study of the Implementation and Impact of The System for Teacher and Student Achievement (TAP)

by

Tyrone D. Burton

Dissertation Committee

Daniel Gutmore, Ph.D., Mentor

Elaine Walker, Ph.D.

Gearld Dawkins, Ph.D.

Fredrick Pinkney, Ed.D.

Presented in partial fulfillment of the requirements for graduation for the degree

Doctor of Educational Leadership

Executive Ed.D. Graduate Program

Seton Hall University

2017

SETON HALL UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN SERVICES
OFFICE OF GRADUATE STUDIES

APPROVAL FOR SUCCESSFUL DEFENSE

Tyrone Burton, has successfully defended and made the required modifications to the text of the doctoral dissertation for the **Ed.D.** during this **Spring Semester 2017.**

DISSERTATION COMMITTEE
(please sign and date beside your name)

Mentor:
Dr. Daniel Gutmore _____ 3/22/17

Committee Member:
Dr. Elaine Walker _____ 3/22/17

Committee Member:
Dr. Gerald Dawkins _____ 3/22/17

Committee Member:
Dr. Fredrick Pinkney _____ 3/22/17

The mentor and any other committee members who wish to review revisions will sign and date this document only when revisions have been completed. Please return this form to the Office of Graduate Studies, where it will be placed in the candidate's file and submit a copy with your final dissertation to be bound as page number two.

Abstract

For many years, educators and researchers have debated over which variables influence student achievement. A growing body of evidence suggests that schools can make a great difference in terms of student achievement, and a substantial portion of that difference is attributed to teachers. (International Institute for Educational Planning, 2004). Specifically, differential teacher effectiveness is a strong determinant of differences in student learning, far outweighing the effects of differences in class size and class heterogeneity (Darling-Hammond, 2000). Students who are assigned to one ineffective teacher after another have significantly lower achievement and learning (that is, gains in achievement) than those who are assigned to a sequence of several highly effective teachers (Saunders & Rivers, 1996). Thus the impact of teacher effectiveness or ineffectiveness seems to be additive or cumulative.

Which factors contribute to teacher effectiveness? Professional development for teachers is a key mechanism for improving classroom instruction and student achievement (Darling-Hammond, 1997). According to the National Commission on Teaching and America's Future, teachers have a more significant influence on student achievement than any other school factor, and they vary widely in their impact. Ongoing learning is an essential component of continuous improvement for teachers (Barber & Mourshed, 2007) as well as a key element in any clinical practice profession (Alter & Coggshall, 2009).

High quality professional development is a central component in nearly every modern proposal for improving education. Policy makers increasingly recognize that schools can be no better than the teachers and administrators who work in them. While these proposed professional development programs vary widely in their content and

format, most share a common purpose: to "alter the professional practices, beliefs and understanding of school personnel toward an articulated end" (Griffin, 1983, p.2).

This study demonstrated that three questions posed in the case study were significant to its findings. The two areas that I examined during this study were program implementation and the impact of the program on student achievement. While there are multiple variables that factored into the measurement of the implementation process and student achievement, this study narrowed the focus to how this particular program (TAP) was implemented and its impact on student achievement. The summary findings from this study suggest that while there were differences between the three schools regarding the various components of the TAP process, participants at the Pre-K through 2nd-grade school were less satisfied than participants at the Elementary and Middle schools and there were no significant differences among the various schools regarding its implementation.

Acknowledgements

Romans 8:28: "And we know that all things work together for good to them that love God, to them who are called according to His purpose."

I have to begin by thanking God for giving me the strength, courage, wisdom, and knowledge to be able to complete this portion of my life's journey. There were daily challenges both professionally and personally, but He supplied me with new grace and mercy every morning. My mission now is to pay it forward.

Many thanks are extended to my mentor and professor, Dr. Daniel Gutmore, for serving as a constant source of support and guidance. I will always remember your straightforward approach that helped to keep me focused on the task at hand, which was to get the work done. There were times when the vicissitudes of life weighed me down and you knew just what to say to get me back on track. Dr. Gutmore, you are the consummate professional as well as a cognitive genius. My life, as well as all of the lives you've touched, are the better for having been mentored by you.

To Dr. Elaine Walker, thank you for your support and patience as my second reader and professor. I appreciate so much the extra time you would always take to make sure that I understood the concept behind the methodology and not just the numbers. You have developed the ability and capability to teach difficult statistical concepts and make them understandable to mathematically challenged individuals such as I. Seton Hall is fortunate to have you as part of its faculty and I was fortunate to have you as my professor.

To Dr. Carlos Lee, thank you for serving as an example of what is possible for a Louisiana boy like me. Your guidance and patience were an example to me to pay it forward. You led by example, and for that I am grateful.

To Dr. Fredrick Pinkney and Dr. Gerald Dawkins, thank you both for serving as external members of my committee and for your constant encouragement in my low times and sad times. You both are a constant source of inspiration to me.

To the Cherokee Park Elementary Family and Teacher's Federal Credit Union, thank you for being my silent yet vigilant cheerleaders. You made this journey bearable through your persistent caring and support. I particularly want to thank my Super Support Team Tangela Sylvie, Cynthia Wilson, and Yakima Ball. You ladies made me stay the course.

To my lovely wife, Wanda, and our boys Benjamin and Zachary, who saw fit to have weekly meetings with me around the Sabbath dinner table to help keep me on target. I will cherish those conversations forever. Especially Wanda, whose advice was always cherished and adhered to.

To my brother, Alphaeus LaTracy Burton, who reminded me that our mother raised strong, independent thinkers who could conquer the world. Thanks for leading the way by earning your Juris Doctorate.

And last but not least, to my mom, Claudette Calhoun Burton Jones, who was not just my mom but my first teacher. She instilled in me the ideology that if my mind could conceive it and in my heart I believed it, then I could achieve it. This work and my doctorate are dedicated to her. She died April 17, 2012, which was my first weekend at Seton Hall, but her wish was that I finish my terminal degree. So mom, this is for you. I love you and miss you.

Table of Contents

List of Tables

List of Figures

CHAPTER I

Introduction

For many years, educators and researchers have debated over which variables influence student achievement. A growing body of evidence suggests that schools can make a great difference in terms of student achievement, and a substantial portion of that difference is attributed to teachers (International Institute for Educational Planning, 2004). Specifically, differential teacher effectiveness is a strong determinant of differences in student learning, far outweighing the effects of differences in class size and class heterogeneity (Darling-Hammond, 2000). Students who are assigned to one ineffective teacher after another have significantly lower achievement and learning (that is, gains in achievement) than those who are assigned to a sequence of several highly effective teachers (Saunders & Rivers, 1996). Thus, the impact of teacher effectiveness or ineffectiveness seems to be either additive or cumulative.

Which factors contribute to teacher effectiveness? Professional development for teachers is a key mechanism to improving classroom instruction and student achievement (Darling-Hammond, 1997). According to the National Commission on Teaching and America's Future, teachers have a more significant influence on student achievement than any other school factor and they vary widely in their impact. Ongoing learning is an essential component of continuous improvement for teachers (Barber & Mourshed, 2007) as well as a key element in any clinical practice profession (Alter & Coggshall, 2009).

High quality professional development is a central component in nearly every modern proposal for improving education. Policy makers increasingly recognize that schools can be no better than the teachers and administrators who work in them. While these proposed professional development programs vary widely in their content and format, most share a common purpose: to 'alter the professional practices, beliefs and understanding of school personnel toward an articulated end (Griffin, 1983, p. 2).

Background

There is a growing body of research regarding teacher quality and programs that affect the instructional behavior of teachers. Lowell Milken the founder of The National Institute for Excellence in Teaching states," that the single most important factor driving student performance is the quality of the teacher in the classroom" (Milken, NIET, 2008). Research regarding teacher quality has been the apex of much deliberation by policy makers that provide funding for professional development. High quality professional development is a central component in nearly every modern proposal for improving education. Policy makers increasingly recognize that schools can be no better than the teachers and administrators who work in them. While these proposed professional development programs vary widely in their content and format, most share a common purpose: to 'alter the professional practices, beliefs and understanding of school personnel toward an articulated end (Griffin, 1983, p. 2). Professional development for teachers is a key mechanism to improving classroom instruction and student achievement (Ball & Cohen, 1999). As stated earlier, according to a report by the National Commission on Teaching and America's Future, teachers have a more significant influence on student achievement than any other school factor and they vary widely in

their impact. Ongoing learning is an essential component of continuous improvement for teachers (Mourshed, 2007) as well as a key element in any clinical practice profession (Alter & Coggshall, 2009).

The content of the professional development is most useful when it focuses on "concrete tasks of teaching, assessments, observation and reflection" (Darling-Hammond & McLahghlin, 1999, p. 598), rather than abstract discussion of teaching. Studies find strong effects of professional development on practices when it focuses on enhancing teachers' knowledge of how to engage in specific pedagogical skills and how to teach specific kinds of content to learners. Equally important is a focus on student learning, including analysis of the conceptual understanding and skills that students are expected to demonstrate (Carpenter et al., 1989).

What attracts teachers to professional development, therefore, is their belief that it will expand their knowledge and skills, contribute to their growth, and enhance their effectiveness with students. However, teachers also tend to be quite pragmatic. What they hope to gain through professional development are specific, concrete, and practical ideas that directly relate to the day-to-day operation of their classrooms (Fullan & Miles, 1992). Development programs that fail to address these needs are unlikely to succeed (Guskey, 1995).

Some of the research regarding teacher quality and programs that influence teacher quality includes "A Status Report on Teacher Development in the U.S. and Abroad" by Linda Darling-Hammond, "Professional Development and Teacher Change," "High Quality Professional for All Teacher Learning" by Sarah Archibald, "Mapping the

Terrain by Hilda Borko," and "Investing in Quality Teaching" by The National Commission on Teaching and America's Future.

Another such program that focuses on teacher quality is The System for Teacher and Student Achievement (TAP). According to research, TAP is a whole school approach to evaluating and compensating teachers and providing professional development opportunities to both improve teaching and help schools attract and retain good teachers (Glazerman et al., 2007). The professional development provided through (TAP) is dramatically different from traditional professional development that has been common in schools. Traditional professional development supports teachers through workshops, conferences and in-service meetings that typically happen outside of the school setting are led by experts from outside the school and are unrelated to the specific needs of the teachers attending the sessions and their students. In contrast, TAP provides teachers with ongoing, job embedded, student learning centered professional growth opportunities that are led by experts located within the school. This model of professional development is based on the research of the past 30 years which includes concludes that in order for professional development to be effective, it needs to be sustained and directly related to the circumstances at the school site (NIET, 2012).

The Purpose of the Study

Teacher effectiveness has rapidly risen to the top of the educational policy agenda. This issue has been identified by the United States Department of Education as one of four key elements in its Race to the Top competition. The focus on teacher effectiveness makes sense. While there might be disagreement about the most effective ways to measure and develop effectiveness, educators and policymakers agree that

ensuring that teachers are capable of improving student learning (National Commission on Teaching and America's Future, 1996). The evidence is clear that teaching is one of the most important school-related factors in student achievement and that improving teacher effectiveness can raise overall student achievement levels (Darling-Hammond, Wei, Andree, Richardson, & Orphans, 2009).

The findings of this study are consistent with those of (Solomon et al., 2002, 2004) where policy makers have expressed concerns about the lack of rigorous, independent research on the effectiveness of The System for Teacher and Student Achievement (TAP) or any other approach to teacher compensation reform and professional development (Hassell, 2002). Given the pace of policy proposals and investment in this area, the research needed to guide these investments are lagging. To date the research literature consists of no experimental studies and very few quasi-experimental studies. The purpose of this study is to investigate whether or not the implementation of The System for Teacher and Student Achievement in three schools in Louisiana that are funded by the Teacher Incentive Fund have an impact on teacher effectiveness and student achievement. The three schools in this study were located in the DeSoto Parish School District and include schools that have implemented The System for Teacher and Student Achievement (TAP) Three Years and Beyond. To determine the impact of teacher effectiveness this study examined a version of the TAP Attitude Survey, which is required by the National Institute for Excellence in Teaching.

The Problem Statement

1. High quality professional development is a central component in nearly every modern proposal for improving education. Policy makers increasingly

recognize that schools can be no better than the teachers and administrators who work in them. While these proposed professional development programs vary widely in their content and format, most share a common purpose: to 'alter the professional practices, beliefs and understanding of school personnel toward an articulated end' (Griffin, 1983, p. 2). In view of what Hammond & McLaughlin reported (1995), professional development for teachers is a key mechanism to improving classroom instruction and student achievement. Teachers have a more significant influence on student achievement than any other school factor and they vary widely in their impact (Kane, Rockoff, & Staiger, 2006; Nye, Knostantoplous, & Hedges, 2004). Ongoing learning is an essential component of continuous improvement for teachers (Barber & Mourshed, 2007) as well as a key element in any clinical practice profession (Alter & Coggshall, 2009).

2. Policy makers have expressed concerns about the lack of rigorous, independent research on the effectiveness of The System for Teacher and Student Advancement (TAP) or any other approach to teacher compensation reform and professional development (Hassell, 2002). Notably, given the pace of policy proposals and investment in this area, the research needed to guide these investments are lagging. To date the research literature consists of no experimental studies and very few quasi-experimental studies-including (TAP) studies by Schacter et al. (2002 and 2004) and Solomon et al. and a study by Clotfekter et al. (2006). The three (TAP) studies were conducted by the developer of the program, and two of them relied on small, self-selected comparison groups of schools in two states. The more recent report includes

larger numbers of comparison schools and teachers, a total of 61 TAP and 285 non-TAP schools across six states.

3. According to the National Institute for Excellence in Teaching, TAP is a whole school approach to evaluating and compensating teachers and providing professional development opportunities to both improve teaching and help schools attract and retain good teachers. The program, which includes value added assessment of teacher performance, professional development, career ladder opportunities, and performance based bonuses, has been adopted in over 100 schools across a dozen states to date.
4. Concomitant, the four key elements of TAP are: **Multiple career paths**, gives teachers opportunities to take on more responsibility and receive compensation for doing so. **Performance based compensation** provides bonuses to teachers who demonstrate their skills and who increase their students' academic growth over the course of a year. **Instructionally focuses accountability** ties teacher evaluations to teaching skills and student achievement. **Ongoing applied professional growth** provides with school-based professional development during the school day. Teachers meet weekly in small "cluster" groups led by a master teacher and together analyzed student data, improve instruction, and learn new research based instructional strategies that increase their students' academic achievement. This study focused on the ongoing applied professional growth element of TAP.
5. Despite the general acceptance of professional development as essential to improvement in education, reviews of professional development research

consistently point out the ineffectiveness of most programs (Wang et al., 1999). A variety of factors undoubtedly contribute to this ineffectiveness. It has been suggested, however, that the majority of programs fail because they do not take into account two crucial factors: (a) what motivates teachers to engage in professional development and (b) the process by which change in teachers typically occurs (Guskey, 1986).

To that end, this study examined the question, "How does implementation of The System for Teacher and Student Achievement model of job embedded professional development used in three schools in Louisiana improve teacher effectiveness?"

Research Questions

This case study represents an attempt to estimate the impact of TAP on teacher quality in terms of student achievement as well as what factors facilitate or impede the implementation of TAP?

Implementation Questions

1. To what extent are there differences between the three schools regarding the various components of The System for Teacher and Student Achievement?
2. To what extent are there differences between Master, Mentor and Career Teachers feeling with regards to implementation?
3. Impact question: To what extent did The System for Teacher and Student Achievement affect Student Achievement?

Significance of the Study

Broadly, this study is significant in that contributes to the current body of knowledge regarding teacher effectiveness relative to improved student achievement. The

results are particularly useful to policy makers, district administrators and principals who are investigating the effects and benefits of programs such as TAP that are designed to improve teacher quality. The study also help guides principals that are currently implementing TAP to ascertain what factors may impede or facilitate the success of the TAP process.

Specifically, the results of this study add to the current body of independent research conducted regarding the implementation and impact of TAP in schools. Currently, the research literature consists of no experimental studies and very few quasi-experimental studies-including (TAP) studies by (Schacter et al., 2002). Accordingly, the three (TAP) studies were conducted by the developer of the program, and two of them relied on small, self-selected comparison groups of schools in two states. Similarly, the more recent report includes larger numbers of comparison schools and teachers, a total of 61 (TAP) and 285 non-TAP schools across six states.

Currently, there are 10 case studies that are formally dedicated to the evaluation, implementation or impact of TAP in schools. However, most of them are partially or fully funded by the National Institute for Excellence in Teaching. The independent nature of this research negate, to a large extent, any biases towards the outcome of the study.

Limitations

This study is limited by the perceptions of the teachers with regard to the answers they supplied on the end of the year TAP Attitude Survey regarding the implementation of the TAP process.

Delimitation

The study is de-limited by selecting only three schools in the district. The study is also de-limited by selecting only one district as a data sample. The study is de-limited by the researcher's beliefs in the TAP process.

Definition of Terms

The System for Teacher and Student Achievement (TAP) is a whole school approach to evaluating and compensating teachers and providing professional development opportunities to both improve teaching and help schools attract and retain good teachers. The program, which includes value added assessment of teacher performance, professional development, career ladder opportunities, and performance based bonuses, was developed by founder Lowell Milken under the umbrella of the National Institute for Excellence in Teaching.

Career Teacher- a career teacher is a regular classroom teacher. This teacher may be new to teaching or may have taught for many years. The career teachers participate fully in cluster group meetings, are evaluated by the principal, master teacher and mentor teacher and are eligible to receive a performance bonus award each year.

Cluster Group- in a TAP School, a cluster is the basic unit for teacher professional growth. The focus of the work done in a cluster group is on instructional improvement for increasing student achievement. The new learning in cluster groups is aligned to the process of the STEPS for Effective Learning and focuses intently on student needs.

Leadership Team- includes all master and mentor teachers in a TAP school and is led by the principal. The team is responsible for overall implementation and operation of the Teacher Advancement Program.

Master Teacher- a master teacher occupies the top ranked teaching position in a TAP school. A master teacher is a highly skilled professional educator who shares significant leadership responsibilities and authority with the principal.

Mentor Teacher- in a TAP School, mentor teachers provide day to day coaching and mentoring services to the teachers under their supervision. They collaborate with colleagues to construct benchmark lessons, to teach and demonstrate model instructional skills to their mentees.

TAP Attitude Survey- is administered to all teachers and administrators at the end of the school year to determine program implementation in the following areas: Instructionally Focused Accountability, Collegiality, Multiple Career Paths, Performance Based Compensation and Ongoing Applied Professional Growth.

OAPD- Ongoing Applied Professional Development.

MCP- Multiple Career Paths

COL- Collegiality

IFA- Instructionally Focused Accountability

PBC- Performance Based Compensation

NIET-National Institute for Excellence in Teaching

All of the definitions of the terms were taken cited directly from the Handbook for Teacher and Student Achievement June 2006.

Chapter Summary

Chapter 1 presents the introduction, the background of the problem, the problem statement, the purpose of the study, the research questions, and the significance of the study, the limitations/delimitations and definition of terms.

The primary focus of the study is to determine to what extent job embedded professional development has on teacher quality and teacher effectiveness. This study specifically examined The System for Teacher and Student Achievement model developed by the National Institute for Excellence in Teaching relative to its implementation and impact teacher on effectiveness.

CHAPTER II

Research on the Impact of Professional Development on Teachers

In the report, "How the world's most improved school systems keep getting better," by Mourshed, Chijoke, and Barber (2010) which examines the findings of the OECD/PISA summary; regarding professional development or peer to peer collaboration they report, " Collaborative practices is about teachers and school leaders working together to develop effective instructional practices, studying what actually works in classroom, and doing so with rigorous attention to detail and with a commitment to not only improving one's own practice but that of others as well. The remarkable feature of the evidence is that the biggest effects on student learning occur when teachers become learners of their own teaching. , empirical, routine, and applied study of their own profession" (Mourshed, Chijoke, & Barber, 2010).

Unfortunately, too many professional learning activities are disconnected from teachers' actual practice and school improvement goals (Cohen & Hill, 2000; Kennedy, 1998) and are not designed with attention to the needs of adult learners Croft, Coggshall, Dolan, and Powers (2010). In addition, a comprehensive analysis of the nationally representative Schools and Staffing Survey (National Center for Education Statistics) showed that the number of opportunities for sustained professional development for teachers, as defined as that which lasted more than eight hours, decreased between 2004 and 2008 (Wei, Darling-Hammond, & Adamson, 2010). An earlier report found that teachers' opportunities for high-quality professional learning (the kind that produces change in teaching practice and student outcomes) are much more limited in the United

States than in most high-achieving nations abroad Darling-Hammond, Wei, Andree, Richardson, and Orphans (2009).

In a survey conducted for The Teaching Commission in 2004, 42 percent of teachers indicated that professional development either *leaves something to be desired* or *is a waste of my time.* Only 18 percent said that the professional learning activities offered by their district or school were significant in helping them become more effective teachers Peter D. Hart Research Associates and Harris Interactive (2004). Such research has led policymakers, teachers, and the public to doubt whether funds allocated to professional development are well spent.

Hence, a distinction must be made between business-as-usual and high-quality professional development that is directly connected to teachers need to increase student achievement. The latter holds great promise to support and improve teachers' practice and effectiveness over the long term (Darling-Hammond et al., 2009; Loucks-Horsely & Matsumoto, 1999; Supovitz & Turner, 2000).

In focus groups with teachers, Shapiro and Laine (2005) found that participants overwhelmingly stated that dedicated time for ongoing professional development in combination with focused, supportive school leadership would encourage them to teach in a hard-to-staff school.

Large-scale studies of effective professional development document that student achievement and teacher learning increase when professional development is teacher led, ongoing and collaborative (Desimone, Porter, Garet, Yoon, & Birman, 2002; Smylie, Allensworth, Greenberg, Harris, & Luppescu, 2001). Fullan (2001) contends that schools that regularly link teachers to other teachers to form a supportive community

(networking), develop new values, beliefs and norms (reculturing), and then reorganize themselves such that networking and reculturing can thrive (restructuring), are capable of successfully reforming teaching and learning.

Research by Guskey (2000) recognize four principles that are common to professional development practices and used in successful initiatives that have produced demonstrable evidence of improvements in student learning:

1. Focused on learning and learners.
2. An emphasis on individual and organizational change.
3. Small changes guided by a grand vision; and
4. Ongoing professional development that is procedurally embedded.

In a case study of a Reading First School in Pennsylvania conducted by then undergraduate Aimee Leigh Morewood, whereby she examined the impact of School-Wide Professional Development on Teachers' Practices, she submitted these finding:

Although teachers indicated that professional development did influence their reading instruction, many of the teachers' comments reflected their reliance on teacher wisdom. Teaching experiences influenced their reading instruction. These responses indicated that teachers relied on their feelings and perceptions about what students needed to guide their instruction.

Assessment often was discussed by teachers; which reflected the emphasis on using assessment data, often addressed in professional development. Teachers indicated that, particularly during grade level meetings, assessment results were reviewed (i.e., informal and standardized assessments), instructional goals were set from the assessment data, student groups were established from the results, and teachers differentiated their

instruction because of the evidence that the assessment results provided (Moorewood, 2007).

Professional development that focused on the reading program was most evident in the teachers' reading instruction. During the interviews, teachers often discussed what they had learned from professional development that focused on the reading program. The observations indicated that the teachers understood the format of the reading program and how to follow the script for reading instruction.

While teachers also spoke of other information that they received in professional development, not everything the teachers discussed was observed during their reading instruction.

All of the participants identified professional development sessions that provided substantive information as the most influential. During the interviews, the majority of teachers identified professional development sessions that were reform type and included collegial participation (i.e., structural). The teachers who selected graduate course work were engaged in sessions that occurred over multiple sessions, while teachers who selected a grade level meeting did not choose a topic that occurred over multiple sessions. The literacy leaders did not identify professional development sessions that had a reoccurring topic. All of the participants indicated that effective professional development that had the greatest impact on their instruction included active learning and was congruent with personal, district, and state standards (i.e., core).

Initially, the teachers had a more traditional view of professional development; coaching as an approach to PD was not seen as an influential source of learning.

At first, when the teachers were asked to discuss an influential professional development session, they were unsure of what to select because of their limited formal professional development opportunities during the year of the study.

The teachers did not recognize the grade level meetings as a potential form of professional development until they were provided a list of professional development opportunities that included the dates and topics of the grade level meetings. Also, none of the teachers identified either of the reading coaches as a source of professional development. In other words, teachers at the school seemed to think that PD was something provided to teachers in a traditional workshop or in-service mode (Anders et al., 2000; Beresik, 2000).

Given that perspectives of literacy leaders differed from teachers' perspectives on effective professional development, there may be inconsistencies in terms of what professional development is offered to teachers relative to their needs and interests. The needs of teachers must be considered when planning professional development.

The teachers who selected graduate courses as influential professional development indicated that they learned much about the process of reading, including the connections between reading and writing, how literacy fit into a school's curriculum, and how to be a more reflective practitioner. The features of the coursework described by the participating teachers reflected the characteristics of effective professional development (Desimone et al., 2002). The teachers described how specific assignments provided authentic learning experiences through expectations for implementing a newly learned concept into their reading instruction (Bean, 2004; NSDC, 2001). Then, teachers continued by describing how this type of professional development provided them with

supportive learning communities (Cochran-Smith & Lytle, 1999; Duffy, 2005; Firestone & Pennell, 1997; Florio-Ruane, Raphael, Highfeild, & Berne, 2004; NBPTS, 2006; Shulman, 1986; Taylor, 2000) in which assignments were discussed and graduate students received feedback from peers.

This case study is significant to this research because it provides an example in which literacy leaders' perceptions about influential professional development differed from teachers' perceptions (Bean, 2004; Bean, Swan, & Morris, 2002; Hord, 2004; Lefever-Davis et al., 2003). Moreover, the view of the special education teacher was consistent with the views of classroom teachers. According to Williams (2006), administrative understanding of teachers' needs is the link between providing teachers with professional development that fits their needs and increasing student. This case study also examines the implementation and impact of a program being implemented through professional development. Even this research involves the implementation of the Teacher Advancement Program; this study suggests that the process of professional development is as important as the program being implemented.

Teachers found that professional development opportunities that facilitated a sense of a learning community were most beneficial (e.g., grade level meetings, colleagues within graduate course, or on-line study group members). Teachers had opportunities to make connections between their prior content knowledge of reading and the new information that was discussed among colleagues (Cochran-Smith & Lytle, 1999). Teachers responded positively to professional development that included collegial discussions.

Schools are responsible for providing teachers with professional development opportunities that foster teacher learning through authentic learning experiences. Therefore, professional development providers within the schools should create opportunities for teachers to be active participants in learning communities that offer experiences that have authentic application to classroom instruction. Teachers' active involvement in learning communities provides opportunities for collegial dialogue that deepens teacher knowledge across and within grade levels, thereby creating an environment for teacher change (Duffy, 2005; Firestone & Pennell, 1997; Florio-Ruane, NBPTS, 2006; NSDC, 2001; Raphael, Highfeild, & Berne, 2004; Shulman, 1986; Taylor, 2000).

Additional research regarding the impact of professional learning comminutes on teaching practice and student learning was conducted by Vicki Vescio, Dorene Ross and Alyson Adams from the school of teaching and learning at the University of Florida as cited in the January 10, 2007 edition of Teaching and Teacher Education 24 (2008). The authors limited the review of published articles or book chapters that included data about the impact of school based PLC's on teaching practice and/or student learning. Using those parameters, the search provided only 10 empirical studies of the work of teachers in learning communities. In addition, they included one large multi-site research report commissioned and published by the General Teaching council of England, Department of Education and Skills. They provided a synthesis of the research on how teaching practices or student achievement changes due to teachers' participation in a learning community and what aspects of the learning community support these changes (Vescio, Ross, & Adams 2008).

Although current professional development literature is replete with articles that extol the virtues of learning communities as an essential way to organize schools in order to maximize time spent in professional development (Bryk, Lee, & Holland, 1993), only recently has the focus of this literature shifted to examining empirically the changes in teachers' practices and students' learning as a result of PLCs. This research is significant to this study because it builds on the work conducted by Darling-Hammond and McLauglin (1995) and the work Darling-Hammond, Wei, Andree, Richardson, and Orphanos (2009) regarding Professional Learning in the Learning Profession based on a nine study of Teacher Development in the United States and Abroad.

The concept of a PLC is based on a premise from the business sector regarding the capacity of organizations to learn. Modified to fit the world of education, the concept of a learning organization became that of a learning community that would strive to develop collaborative work cultures for teachers (Vescio, Ross, & Adams 2008).

Each of the studies reported focuses on the significant and nature of teacher collaboration. It is equally important to note that most of the studies document the specific focus of the teachers' collaborative efforts (Berry et al., 2005; Englert & Tarrant, 1995). The middle school case study of teachers collaborating to create innovative curriculum, the goal of the teachers' work was to improve learning for low and underachieving students Phillips (2003). The teachers in studies by Starhan (2003), Hollins et al. (2004), and Englert and Tarrant (1995) all had an underlying focus on improving student literacy. Similarly, two overlapping studies (Supovitz, 2002; Supotivz & Christman, 2003) powerfully demonstrated the importance of focus in teachers' collaborative actions. Both authors reported that teachers who participated on teams or in

small communities that focused on instructional practice reported changes in instructional culture (McGhee, 2001).

A closer examination of the impact of PLC's in the context of increased student achievement was found in these studies. All eight studies (Berry et al., 2005; Bolman et al., 2005; Hollins et al., 2004; Louis & Mark, 1998; Philips, 2003; Starhan, 2003; Supovtiz, 2002; Supovitz & Christman, 2003) that examined the relationship between teachers' participation in PLC's and student achievement found that student learning improved. Berry et al. (2005) documented the progress of a rural elementary school over a four-year period. During this time, the results of grade level testing indicated that students improved from struggling with slightly more than 50% performance at or above grade level to improving rapidly with more than 80% of students meeting grade level standards. In Strahan's (2003) account of three struggling elementary schools over a three-year period, results also demonstrated dramatic improvement. In each of the school's student test scores on state achievement tests rose form 50% proficient to more than 75%.

Hollins et al. (2004) reported that at both levels assessed second and third grade struggling African American students in the target school increased their achievement significantly more than comparable students in the district did. In 1998, 45% of second graders at the largest school scored above the 25th percentile as compared with 64% in 1999, and 73% in 2000. This is a 28% overall gain. District wide, 48% of second graders scored above the 25th percentile in 1998, 61% in 1999 and 56% in 2000, an overall gain of 12% (p. 259).

After adjusting for grade level and student background Louis and Mark (1998), found that student achievement was significantly higher in schools with the strongest PLC's. This effect was so strong that the strength of the PLC accounted for 85% of the variance in achievement in this study. Supovitz (2002) and Supovitz and Christman (2003) found evidence to suggest that those communities that did engage in structured sustained, and supported instructional discussions and investigated the relationships between instructional practices and student work produced significant gains in student learning (p. 5). It also important to note, however, that in the communities where teachers worked together but did not engage in structured work that was highly focused around student learning, similar gains were not evident.

The result from this study, which examines some empirical research, is relative to this study because the correlation between professional development and learning communities is dichotomous. Traditional models for of professional development have focused on providing teachers with the skills and knowledge necessary to be "better" educators. These models have typically be grounded in the assumption that the purpose of professional development it to convey to teachers "knowledge for practice" (Cochran-Smith & Lytle, 1999). The PLC model represents a fundamental shift away from the traditional model of professional development. PLC's at their best are grounded in a generation of "knowledge of practice" (Cochran-Smith & Lytle, 1999). Both processes involve teacher collaboration in order to be effective. The TAP process is a marriage of both genres.

Concomitant with a review of the literature on professional development in the United States is the TALIS report commissioned by the OECD in 2009. The Organization

for Economic Co-Operation and Development is a unique forum where the governments of 30 democracies work together to address the economic, social and environmental challenges of globalization. The OECD member countries are: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.

The Teaching and Learning International Survey (TALIS) report examined how teachers create effective teaching and learning environments. Specific to this study is the results regarding teachers' perception of professional development and its impact on their own development. TALIS asked teachers to report the impact of their professional development activities on their development as a teacher. Since TALIS reports teachers' perceptions, these reports of perceived impact should be treated with some caution as indicators of the effectiveness of these activities. Nevertheless, if teachers feel that a development activity has had limited impact, this is likely to color their decisions, and perhaps those of their colleagues, regarding future participation in that activity.

On average across participating countries, teachers reported that the most effective forms of development were "Individual and collaborative research", "Informal dialogue to improve teaching" and "Qualification programs", all with close to 90% of teachers reporting a moderate or large impact on their development as a teacher. The development activities that were reported to be relatively less effective were attendance at "Education conferences and seminars" and taking part in "Observation visits to other

schools", though even for these activities around 75% of teachers reported a moderate or high impact (OECD, 2009).

This was a commissioned international survey and its relevant significance to this study and the larger body of work regarding professional development is that it narrows the focus on how professional development impacts teachers' own development and their perception of the types of activities that are effective in creating productive learning environments. Collegial collaboration is prevalent in all of the studies mention regarding the type of professional development that has an impact of teaching and learning.

Research on the System for Teacher and Student Achievement

The System for Teacher and Student Achievement (TAP) was developed by the Milken Foundation in the late 1990's with the aim of helping schools put a highly skilled, strongly motivated, competitively compensated teacher in every classroom in America. According to its developers, TAP is a comprehensive, research based school reform that seeks to attract talented people to the profession and create an environment in which they can thrive. It does so by offering sustained opportunities for career advancement and ongoing school based professional development, by insisting on instructionally focused accountability, and by providing performance pay (NIET 2010). Schools implement the program, with leadership and guidance from its developer, the National Institute for Excellence in Teaching (NIET). All schools that implement TAP must contain the four elements of TAP, multiple career paths, ongoing applied professional development, instructionally focused accountability and performance-based compensation.

The System for Teacher and Student Achievement (TAP) has been incorporated in more than 40 districts in 11 states, receiving positive reviews from program evaluators

as an exemplary model of systemic education reform. TAP is grounded in four elements including applied professional growth (the other three are multiple career paths, instructionally focused accountability, and performance-based compensation). Student growth has a direct correlation to teacher growth in professional knowledge, skills, and abilities. Integral to professional development are master and mentor teachers who evaluate teachers, facilitate cluster group meetings, examine student data, and help each other learn instructional strategies through coaching and modeling (Daley & Kim, 2010). One of the program's strengths is building local capacity with those who know the school context best.

TAP requires an investment in increased time for teachers to engage in substantive learning experiences. Schools implementing TAP consider restructuring options to increase faculty release time, such as block scheduling, hiring additional qualified substitute teachers, extending the school calendar, or changing existing faculty time commitments (Van Hook, Lee, & Ferguson, 2010). A reliable data system is essential to ensuring that time is well spent. The Comprehensive Online Data Entry system (CODE), a Web-based application, is used to create reports summarizing teacher performance across standards individually to develop growth plans or across groups according to grade levels, subject areas, or customized clusters so that administrators can effectively arrange group professional development. The National Institute for Excellence in Teaching provides technical assistance to schools on analyzing and using these data (Daley & Kim, 2010).

A newly released third-party study documents how *TAP: The System for Teacher Student Achievement* improves student achievement and teacher practices compared to

similar schools. The study was conducted by Interactive, Inc., a national firm specializing in education program evaluation, the two-year study included schools from across Louisiana, including elementary, middle and high schools in urban, suburban, and rural communities. Louisiana was selected because it has one of the longest standing TAP implementations reaching back to 2001, with nearly 80 schools participating in the 2012-2013 school year. NIET commissioned Interactive, Inc., to investigate how TAP transforms schools to create more effective workplaces that support increases in instructional skills, which culminates in improving student achievement (NIET 2013).

The study's lead author, Dr. Dale Mann, concluded that, "TAP schools outperformed the comparison schools despite the fact that some of the comparison schools had teacher coaches, teacher leaders and Professional Learning Communities that resemble TAP's cluster groups etc. The multiple, positive outcomes from the TAP System participating schools makes the point that intensive, comprehensive, and sustained interventions are necessary to transform schooling" (NIET 2013).

To understand the impact of student performance Interactive examined student achievement in two ways. First, the TAP System schools were matched to schools not using the TAP System and compared across time using the state created School Performance Score Index. The comparison found a substantial difference favoring TAP System schools after one year of implementation and this difference increased in subsequent years. Second, student performance was compared between TAP System schools and matched non-TAP System schools. Findings from the two-group comparisons show the TAP System school students outperformed their counterparts in English/Language Arts; Mathematics; Science and Social Studies (NIET, 2013).

While the analysis documents significant improvements in student performance across schools, the larger focus of the study was on ascertaining the school- based reasons for student improvement. Across a two year period, the study authors examined teacher practices by collecting real-time, random-interval work samples. They also conducted an annual web-survey on instructional practices and a series of interviews with career, mentor, and master's teachers as well as principals. The authors found that TAP teachers improved their knowledge, practices, and classroom implementation of successful instructional practices and explained that the TAP System is as much an influence in their school-wide, effective arena as it is in the classroom-specific, effective teacher arena (NIET, 2013).

Based on the evidence, the study concludes that "the tight coupling between TAP evaluation an TAP support suggests that teachers in TAP schools accept an unusual amount of evaluation in return for an unusual amount of support" and this level of support corresponds to improvements in teachers practice and student achievement (NIET, 2013).

The research regarding TAP is important to this study because despite the general acceptance of professional development as essential to improvement in education, reviews of professional development research consistently point out the ineffectiveness of most programs (Cohen & Hill, 1998; Kennedy, 1998; Wang et al., 1999). A variety of factors undoubtedly contributes to this ineffectiveness. It has been suggested, however, that the majority of programs fail because they do not take into account two crucial factors: (a) what motivates teachers to engage in professional development and (b) the process by which change in teachers typically occurs (Guskey, 1986).

Policy makers have expressed concerns about the lack of rigorous, independent research on the effectiveness of (TAP) Teacher Advancement Program or any other approach to teacher compensation reform and professional development (Hassell, 2002). Given the pace of policy proposals and investment in this area, the research needed to guide these investments is lagging. To date the research literature consists of no experimental studies and very few quasi-experimental studies-including (TAP) studies by Schacter et al (2002; 2004) and Solomon et al. and a study by Clotfekter et al. (2006). The three (TAP) studies were conducted by the developer of the program, and two of them relied on small, self-selected comparison groups of schools in two states. The more recent report includes larger numbers of comparison schools and teachers, a total of 61 (TAP) and 285 non-TAP schools across six states.

High quality professional development is a central component in nearly every modern proposal for improving education. Policy makers increasingly recognize that schools can be no better than the teachers and administrators who work in them. While these proposed professional development programs vary widely in their content and format, most share a common purpose: to 'alter the professional practices, beliefs and understanding of school personnel toward an articulated end' (Griffin, 1983, p. 2). Professional development for teachers is a key mechanism to improving classroom instruction and student achievement (Ball & Cohen, 1999; Cohen & Hill, 2000; Corcoran, Shields, & Zucker, 1998; Darling-Hammond & McLaughlin, 1995; Elmore, 1997; Little, 1993; National Commission on Teaching and America's Future, 1996).

TAP is a whole school approach to evaluating and compensating teachers and providing professional development opportunities to both improve teaching and help

schools attract and retain good teachers. The program, which includes value added assessment of teacher performance, professional development, career ladder opportunities, and performance-based bonuses, has been adopted in over 100 schools across a dozen states to date (NIET, 2008).

Implementation Theory: How Schools Respond to New Programs

Implementation theory is a study of the relationship between the structure of the institution through which individuals interact and the outcome of the interaction (Jackson, 2001). Despite the general acceptance of professional development as essential to improvement in education, reviews of professional development research consistently point out the ineffectiveness of most programs (Cohen & Hill, 1998, 2000; Kennedy, 1998; Wang et al., 1999). Although teachers are generally required to take part in professional development by certification or contractual agreements, most report that they engage in these activities because they want to become better teachers. They see professional development programs as among the most promising and most readily available routes to growth on the job (Fullan, 1991, 1993), not only as a way to combat boredom and alienation, but also as a pathway to increased competence and greater professional satisfaction (Huberman, 1995).

One of the overarching questions that this case study endeavors to answer is how teachers respond to the implementation and sustained use of innovations introduced during professional development. The process of adopting innovations has been studied for over 30 years, and one of the most popular adoption models is described by Everett Rogers in his book, *Diffusion of Innovations* (Sherry & Gibson, 2002). Rogers' diffusion

of innovations theory is the most appropriate for investigating the adoption of technology in higher education and educational environments (Medlin, 2001; Parisot, 1995).

Rogers defines *diffusion* as "the process in which an innovation is communicated through certain channels over time among members of a social system" (p. 5). As expressed in this definition, innovation, communication channels, time and social systems are the four key components of the diffusion theory.

Rogers (2003) described the *innovation-decision* process as "an information-seeking and information-processing activity, where an individual is motivated to reduce uncertainty about the advantages and disadvantages of an innovation" (p. 172). For Rogers (2003), the innovation-decision process involves five steps: (a) knowledge, (b) persuasion, (c) decision, (d) implementation, and (e) confirmation. These stages typically follow each other in a time-ordered manner.

According to Rogers, implementation occurs at what he terms the stage of reinvention. Reinvention is "the degree to which an innovation is changed or modified by a user in the process of its adoption and implementation" (Rogers, 2003, p. 180). He suggests also that the more reinvention takes place, the more rapidly an innovation is adopted and becomes institutionalized. The crucial point is that it is not the professional development *per se*, but the experience of successful implementation that changes teachers' attitudes and beliefs. They believe it works because they have seen it works, and that experience shapes their attitudes and beliefs (Guskey, 1985, 1986, 1989).

Relative to the rate of the adoption and implementation of an innovation or program Rogers (2003) describes the process as "an uncertainty reduction process" (p. 232), and he proposes attributes of innovation that help to decrease uncertainty about the

innovation or program. The research by Rogers (2003) includes five characteristics of innovations: (a) relative advantage, (b) compatibility, (c) complexity, (d) trialability, and (e) observability. Rogers (2003) stated, "individuals' perceptions of these characteristics predict the rate of adoption on innovation" (p. 219).

In summary, Rogers (2003) argued that innovations offerings more relative advantage, compatibility, simplicity, trilability, and obervability will be adopted faster than other innovations. Rogers does caution, "Getting a new idea adopted, even when it has obvious advantages, is difficult" (p. 1.), so the availability of all of these variables of innovations speed up the innovation-diffusion process. This research is relevant to this study in that it exposes and explains some of the complex issues that are often faced with program implementation in schools and may also give clues to what types of things administrators and district personnel may encounter as they endeavor to add new instructional programs. Program implementation may also explain some of the variances that may account for student's achievement levels decreasing at the implementation phase.

How Teachers Lead Professional Development

Good teaching is not an accident. While some teachers are more naturally gifted than others, all effective teaching is the result of study, reflection, practice, and hard work (Marzano, Waters, & McNulty, 2005). A teacher can never know enough about how a student learns, what impedes the student's learning, and how the teacher's instruction can increase the student's learning. Professional Development is the only means for teachers to gain such knowledge (Waters & McNulty, 2005). Whether students are high, low, or

average achievers, they will learn more if their teachers regularly engage in high-quality professional development (NSDC 2001).

The literature suggests that professional development must be of high quality in its theory of action, planning, design and implementation. It further implies that teachers must have the motivation, belief, and skills to apply the professional development to classroom teaching supported by ongoing school administrators and follow up consultations with experts (Borko, 2004; Showers, Joyce, & Bennett, 1987).

Wei, Darling- Hammond, Andrea, Richardson, and Orphanos, in February 2009, as part of their multi-year study titled "The Status of Professional Development in the United States and Abroad," reported the following:

1. In line with other research on professional development, collegial, job – embedded models of support appear to have more effect on practice than traditional workshop models of training.
2. More countries offer professional development programs specifically for new teachers, induction programs are mandatory in many countries including Australia, France, Greece, Israel, Italy, Japan, Korea, New Zealand and Switzerland.
3. Comparisons of American teachers' participation in professional development with that of teachers in the international community also demonstrate that the United States is substantially behind other OECD nations in providing the kinds of powerful professional learning opportunities that are more likely to build their capacity and have significant impacts on student learning.

The overarching question in this context is, "How do teachers lead professional development?" Research supports the following attributes of what teachers should be doing to support successful professional development.

The content of professional development is most useful when it focuses on "concrete tasks of teaching, assessments, observations, and reflection" (Darling-Hammond & McLaughlin, 1995, p. 598) rather than abstract discussions of teaching. The focus is on student learning includes an analysis of the conceptual understanding and skills that students are expected to demonstrate (Blank, de las Alas, & Smith, 2007; Cohen & Hill, 2001; Lieberman & Wood, p. 202; Merek & Methven, 1991; Saxe, Gerahart, & Nasir, 2001; Wenglinsky, 2000).

Opportunities for active learning or "sense-making" activities are important (Snow-Renner & Lauer, 2005, p. 11). There is significant use of inquiry based instructional strategies (Supovitz, Mayer, & Kahle, 2000). Teachers model the sought after practices and constructing opportunities for teachers to practice and reflect on the new strategies (Carpenter et al., 1989; Cohen & Hill, 2001; Penuel, Fishman, Yamaguchi, & Gallagher, 2007; Saxe, Gearhart, & Nasir, 2001; Supovitz, Mayer, & Kahle, 2000). It is sustained and intense and focuses on teaching practices and student learning (Cohen & Hill, 2001; McGill-Franzen et al. 1999; Supovitz, May-er, & Kahle, 2000, Weiss & Pasley, 2006). There is also research to support the implementation of new ideas (Killion, 1999, 2002a, 2002b). Coaching is offered by accomplished peers and includes "ongoing classroom modeling, supportive critiques of practice, and specific observations" (Poglinco et al., 2003, p. 1)

The relevance of this study is significant to the overall study in that it explains not only how effective teachers should lead professional development but also describes the similarities that occur in different countries amongst effective teacher leaders. In as much as the TAP process employs the usage of teachers in the role of Master and Mentor teachers this study adds substantive proof of the key components of lead teachers such as relevant assessments, observations that provide timely feedback which provides focused reflective thoughts for the teacher being observed rather than abstract discussions of teaching.

The Responsibility of the Principal Regarding Professional Development

The importance of principals in the professional development process cannot be overlooked. Principals can be the key to creating optimal conditions for teacher learning and student learning. According to Ann Liberman (1995), principals should collaborate with teachers as partners, support teachers and "create opportunities for them to grow." The principal is not the sole leader of professional development. According to Lambert (2002) the days as the principal as the lone instructional leader is over (p. 37).

The value of teacher professional growth, the important role of principals in fostering that growth, and the techniques that are most often used by principals to assist in teacher growth and development have been examined by a number of education scholars in the past (Berube, 2004; Cochran-Smith & Lytle, 1999; Darling-Hammond, 2000, 2005; Drago-Severson, 2007; Dufour, 1995; Glickman, 2002). Most of these studies focus on new and beginning teachers (Jueves, 2011).

Findings from these studies point to the principal sharing decision making with teachers and involving them in planning professional development to meet their goals.

Teachers tend to demonstrate high self-efficacy when communication with the principal is regular, open and honest (Gimbel, 2003; Jueves, 2011).

Existing literature on teacher growth and leadership suggests that effective principals develop strong relationships with their teaching staffs through both formal and informal evaluations, coupled with ongoing positive dialogue between principals and teachers (Cochran-Smith & Lytle, 1999; Danielson, 2002; Glickman, 2002; Jueves, 2011; Kaplan, 2001; Pancake & Mollier, 2007; Zimmerman, 2006).

Principal leadership that supports adult development makes schools better places for teaching and learning. Several studies suggest that principals realize that most teachers expand their teaching range only with carefully designed support and assistance (Berube, 2004; Blase & Blase, 1998; Gimbel, 2003; Halfacre & Halfacre, 2006; Jueves, 2011; Sergiovanni, 1992; Zimmerman, 2006).

Formal and informal opportunities that principals provide for teacher collaboration yield vast positive results for teacher growth. In schools where teachers frequently talk to each other the most about practice and where principals stayed in touch with the community, students had noticeably higher academic achievement (Blase & Blase, 1998; Cochran-Smith & Lytle, 1999; Drago-Severson, 2007; Jueves, 2011; Leanna, 2002; Wenglinsky, 2000).

An integral component of sustained school improvement has been the willingness and ability of principals to assume the role as staff developers. To do this, principals must have clear and open communication with teachers and create opportunities to build relationships (Halfacre & Halfacre, 2006; Youngs & King, 2002). These principal

behaviors increase principal-teacher trust, a necessary ingredient in helping teachers reach their professional goals (Gimbel, 2003; Jueves, 2011).

A study published in the American Association of School Administrators (AASA) (2011) investigated teacher and principal perceptions of the role of the principal in fostering teachers' professional growth. A Likert-type questionnaire was used to explore the ways 476 teachers and 135 principals see themselves as being supported in their professional growth.

For this descriptive-exploratory study of principal and teacher perspectives, an original questionnaire was used. A list of 20 final questions was developed and critiqued by university colleagues with expertise in questionnaire design. The creation of the final questionnaire emanated from data compiled from a 2-question, field-test questionnaire pilot-tested with a sample of graduate students enrolled in summer graduate courses in education. The two questions were as follows:

1. What kind of tangible supports does your principal offer to make you feel you are growing professionally? List 10 behaviors, structures or policies of the principal (Jueves, 2011).
2. What are the barriers to your principal not being able to support your professional growth? List 10 structures, behaviors, or policies that impede your principal from supporting you professionally (Jueves, 2011).

According to the study that was conducted, once editing, revision, and IRB approval, the final 20-question survey was sent electronically by using Zommerang, which guarantees anonymity. Respondents included 478 teachers, and 135 principals. Elementary principals responded more than those from other grade levels did, while the

greatest number of teacher respondents came from the high school level. Principal respondents were predominately-white females who worked at the high school level for 2-5 years. Teacher participants were predominately-female white and were likely to have worked for 2-5 years at the K-5 grade level. In each question, (*N*) varied, as not all of the 135 principals and 478 teachers responded to each question. The free and reduced lunch demographic data showed that 41.7% of the principal respondents came from schools with 5-19% free and reduced lunch while 40.3% came from the least affluent schools with fewer than 20% of students' eligible free and reduced lunch. Teacher respondents came from schools with 21.5% free and reduced lunch in the 5-19% category and 17.3% in the free/reduced lunch category of 20% or more.

Is should be noted that the purpose of this study was to examine how principals and teachers perceived the role of the principal in facilitating the professional growth of their teachers as determined by self-reported responses of a sample of Massachusetts teachers and principals. The response rate was 8.6% and as such, this was an exploratory study. The data seems to suggest that the longer a teacher's tenure, the less communication there is between principal and teacher. The data also suggested that principal participants think they seek teacher input before making a decision, but teacher participants do not agree with this perception (Jueves, 2011).

The dissonance in the data may contribute to some teachers feeling unappreciated by their principals and not being held in esteem for their professionalism. Zimmerman (2006) found that high levels of communication between administration and staff correlated positively with high teacher self-efficacy. Studies conducted by Blasé and Blasé (1998) and Gimel (2003) indicated that teacher input into decision-making is

important for building principal-teacher trust. These same authors propose that an open and honest climate is conducive for teacher growth, yet data suggest that such a climate is valued among our principal sample but less so by our teacher sample. Youngs and King (2002), Gimel (2003), and Zimmerman (2006) suggested that to enhance teacher growth, principals should solicit input from their teachers when making decisions and should maintain open communication with all teachers, new and veteran, to engage them in conversations about instructional practice. In this was teachers feel validated and respected for their professionalism. Their literature review demonstrated that strong principal-teacher relationships, coupled with ongoing positive dialogue between principals and teachers, are integral to teacher professional growth (Cochran-Smith & Lytle, 1999; Danielson, 2002; Glickman, 2002; Kaplan, 2001; Zimmerman, 2006).

There were three recommendations that surfaced because of the exploratory study cited, regarding the principals' role in professional development. Primarily, principals should observe and offer effective, timely feedback to teachers on instructional practices. Secondly, the principals' role in providing a mentor, especially to new and beginning teachers is important. Teacher data from this exploratory study suggest that the importance of a mentor in teacher development. Lastly, principals should look for effective teachers to serve as mentors and provide training for them to serve as role models for their peers. The quality of the teacher mentor, the mentor protégé relationship, and how the mentor is trained all contribute to the professional growth of the teacher (Jueves, 2011).

The exploratory study conducted suggests that principals may need to pay heed to veteran teachers and be sure they are acknowledged for their experience. Additionally,

principals need to provide appropriate professional-development opportunities for veteran teachers to grow and contribute to their schools.

This study is crucial to the overall study because the value of teacher professional growth, the important role of principals in fostering that growth, and the techniques that are most often used by principals to assist in teacher growth and development have been examined by a number of education scholars in the past. Additionally, this was an exploratory study published in a peer-reviewed journal, which makes the strength and relevance of the findings a stronger correlation between the perception of the role of the principal and professional development and the actual practice of principals. Limitations would be the sample size of the population and the self-reported responses of the teachers and principals.

Additional research regarding the principals' responsibilities should include ensuring effective collaboration takes place. They should acknowledge that collaboration is worthwhile, and it can work. It will not work, however, if a school's leader does not put a great deal of work, planning and trust into it (Daane et al., 2000). The collaboration process should begin with reviewing the data and gathering input from teachers, curriculum staff and consultants to outline or modify the campus' action plan.

In order to facilitate the process of effective job embedded professional development Rogers (2003) refers to the principal's role and responsibility as that of change agent or opinion leader. He states that firm's attitudes are developed through communication exchanges about the innovation of peers and opinion leaders (p. 311). Social systems can be characterized by as heterophilous or homophilous. On one hand, heterophilous social systems tend to encourage change from system norms. In them, there

is more interaction between people from different backgrounds, indicating a greater interest in being exposed to new ideas. These systems have opinion leadership that is more innovative because these systems are desirous of innovation (p. 289). On the other hand, homophilous social systems tend toward system norms. Most interaction within them is between people from different backgrounds. People and ideas that differ from the norms are seen as strange and undesirable. These systems have opinion leadership that is not very innovative because these systems are averse to innovation (p. 288).

The role and responsibility of the principal is to understand the dynamics of the group of teachers that he working with build capacity among them to develop a sense of innovation where communication exchanges that lead to collegial collaboration takes place. Effective communication, which Stephen Covey (1990, p. 237) argues is "the most important shill in life," is key to the successful implementation of any new program. Many studies on leadership list communication as the top skill of successful leaders (Gardner & Laskin, 1995; Kouzes & Posner, 1995; Mcewan, 2003; Maxwell, 1998; Sava, 1997; Tichy, 1997). School principals are who are highly successful communicate practically all of their working hours (Elmore, 2000). Thus, effective communication consists of a wide variety of behaviors in addition to talking, such as listening, writing, and reading and includes nonverbal messages in the form of body language and tome in both spoken and written language. In this respect, effective communication is an art form, a "Dance of Connection" that, according to Learner (2001, p. 3), coordinates all of these difference skills into one complex act.

Sergiovanni (1992) argued, "the heart of leadership has to do with what a person believes, values, dreams about and is committed to the person's personal vision" (p. 57).

Effective principals emphasize the emotional and interpersonal relationships instead of the bureaucracy (Elmore, 2000). Cotton (2003) argues that strong school leaders will recognize the achievements of students and staff and use them to augment a positive and supportive atmosphere. Marzano, Waters and McNulty (2005) term this "affirmation and contingent awards." Such a culture places a high value on school ritual, ceremony and tradition. Cotton (2003) couples the ability to build a positive culture with vision, arguing that, to create an effective environment, a learner must have a well-developed vision that includes more than student academic achievement. Marzano, Waters, and McNulty (2005) take this a step further, explaining that a vision and a culture cannot exit solely in principle but rather the school leader must show members of the school, through both words and actions, what traits or behaviors are valued (TAP Handbook, 2006).

Fullan (2001) stated that true leaders do not overwhelm others by being Superman or by creating dependency. They use the power of the positive culture they have developed to involve as many people as possible to attain specific goals. They respect the people who resist change, and then seek to understand and address the reasons for the resistance (Mcewan, 2003). In short, leaders have to be masters of change, highly flexible, and they use their vision to help motivate others. They instill trust by thoughtful and consistent arguments and actions, thus enabling others to act (Kouzes & Posner, 2000). They bolster confidence in their vision by celebrating incremental steps along the way. The true change master is able to manage change so that it is organized, resulting in a more positive and powerful environment able to sustain change (TAP Handbook, 2006).

Leithwood and Riehl (2003) described effective leaders as those who know what they were not and then construct a focused and systematic plan to reach it. Marzano, Waters, and McNulty (2005) similarly emphasized the importance of focus, a major characteristic of a producer, to a school leader. To do this successfully, the principal must become directly involved in the curriculum, instruction, and assessment of the school. Thus, while administrators do need to manage and direct staff, their primary responsibility should be understanding and becoming involved the subject matter and pedagogy of the school (Stein & D'Amico, 2000). When this is done, the faculty will be inspired to accomplish things that might otherwise be beyond their grasp (Marzano, Waters, & McNulty, 2005; TAP Handbook, 2006).

Another characteristic of strong leadership included in this review is the ability to facilitate cooperation among others, or take on the role of facilitator (Mcewan, 2003). Facilitators' couple a clear vision with a positive environment to build strong relationships (Mcewan, 2003), striving to make people feel a part of the community or team. They exhibit strong interpersonal; skills, which they use to improve the team and bolster confidence. Facilitators are not afraid to share power, because they realize that by doing so it multiples (Maxwell, 1998; Mcewan, 2003; Kouzes & Posner, 1995; Sergiovanni, 2000; Tichy, 1997). They also spend time with people not to monitor or evaluate them but to develop relationships and trust. By getting to know individuals and their talents, the school facilitator has a better understanding of how to utilize those talents to meet school goals and share power in ways that benefit the entire team, namely by helping to reach the desired results and vision (TAP Handbook, 2006).

Cotton (2003) further defines a facilitator as one who shares leadership, encourages teacher autonomy, and promotes collaboration throughout the school. Marzano, Waters, and McNulty (2005) argue that facilitators cannot operate in a vacuum to foster collaboration, they say, the school leader must create a shared leadership and supportive culture, and be adept at communicating. This can only happen when the leader actively and openly solicits input and adopts a "participative management" style (DePree, 1989, p. 24; TAP Handbook, 2006).

The point needs to be made again that the findings from these studies as well point to the principal sharing decision making with teachers and involving them in planning professional development to meet their goals. Teachers tend to demonstrate high self-efficacy when communication with the principal is regular, open and honest (Gimbal, 2003). A reflective look at the literature reviewed in Chapter 2 suggests that the principals' responsibility with regard to professional development is to foster collegial collaboration among teachers, build capacity for teachers to use data and grow other teachers, encourage teacher autonomy, effectively communicate the goals needed for growth, provide regular timely and consistent feedback about teacher performance. As is the principal, so is the school (Jueves, 2011).

The lessons that we have learned from professional development are multi-faceted. In the study conducted by Darling-Hammond, Ruth Chung Wei, Alethea Andree, Nikole Richardson and Stelios Orphanos entitles, "*A Report on Teacher Development in the U.S. and Abroad,*" they found a number of common features characterizing professional development practices in high achieving countries:

1. Extensive opportunities for both formal and informal in-service development.
2. Time for professional learning and collaboration built into teachers' work hours.
3. Professional development activities that are embedded in teachers' context and that are ongoing over a period.
4. School governance structures that support the involvement of teachers in decisions regarding curriculum and instructional practices.
5. Teacher induction programs for new teachers with release time for new teachers and mentor teachers, and formal training for mentors.
6. Induction is highly structured, with clear roles for administrators, staff developers, mentors, and others responsible for the development of new teachers.
7. Induction is focused on professional growth and structured learning that are viewed as the entry into a lifelong professional growth process.
8. Community and collaboration are central to the induction process, using observation, demonstration, discussion, and friendly critiques as ways of ensuring that teachers share the language, tools and practices (Wong, Britton, & Ganser, 2005, cited in NCTAF, 2005, p. 16.)

Teachers have a more significant influence on student achievement than any other school factor, and they vary widely in their impact (Kane, Rockoff, & Staiger, 2006; Nye, Konstantopolous, & Hedges, 2004).

Poor and minority students are more likely to be assigned teachers who have less experience and who are teaching out of their field or without full certification, which

likely negatively influences their ability to produce high levels of student learning (Clotfelter, Ladd, & Vigdor, 2007).

We have learned from the TALIS report that on average across participating countries, teachers reported that the most effective forms of development were "Individual and collaborative research," "Informal dialogue to improve teaching," and "Qualification programs" all with close to 90% of teachers reporting a moderate or large impact on their development as a teacher. The development activities that were reported to be relatively less effective were attendance at "Education conferences and seminars" and taking part in "Observation visits to other schools", though even for these activities around 75% of teachers reported a moderate or high impact. (OECD, TALIS, 2009).

We have learned that teachers found professional development opportunities that facilitated a sense of a learning community were most beneficial (e.g., grade level meetings, colleagues within graduate course, or on-line study group members). Teachers had opportunities to make connections between their prior content knowledge of reading and the new information that was discussed among colleagues (Cochran-Smith & Lytle, 1999). Teachers responded positively to professional development that included collegial discussions.

We've learned that the role and responsibility of the principal is to understand the dynamics of the group of teachers that he working with build capacity among them to develop a sense of innovation where communication exchanges that lead to collegial collaboration takes place. Effective communication, which Stephen covey (1990, p. 237) argues is "the most important skill in life," is key to the successful implementation of any new program. Many studies on leadership list communication as the top skill of

successful leaders (Maxwell, 1998; Mcewan, 2003; Sava, 1997). Highly successful school principals communicate during practically all of their working hours (Elmore, 2000). Thus, effective communication consists of a variety of behaviors in addition to talking, such as listening, writing, and reading and includes nonverbal messages in the form of body language and tome in both spoken and written language. In this respect, effective communication is an art form, a "Dance of Connection," according to Lerner (2001, p. 3), coordinates all of these different skills into one complex act (TAP Handbook, 2006).

Relative to the principals' role in professional development there is an accentuated difference between a leader and leadership development Day (2000). In his effort to build capacity, he must identify and grow the teacher leaders in the building. As the German writer Johann Wolfgang von Goethe said, "Treat people as if they were what they ought to be and you help them to become what they are capable of being." People like to be guided by a person whom they respect, a person who inspires trust, someone who provides a clear sense of direction.

We have learned that PLC's and traditional Professional Development are dichotomous. They both are a means to an end, which is to create a better teacher that will produce a learning environment that enhances and increases student achievement, thereby reducing the variation and inequity in the quality of teacher in the classroom. The single most important factor regarding increased student achievement is the quality of the teacher in the classroom (Leithwood, 2003).

To reduce the variation and inequity in teachers' influence on student learning as well as to increase the overall level of teacher effectiveness (thereby reducing

achievement gaps and enhancing learning for all students), a redesign of the systems that recruit, prepare, select, develop, retain, evaluate, advance, and compensate teachers is crucial (Consortium for Policy Research in Education Strategic Management of Human Capital, 2009; Curtis & Wurtzel, 2010; Hill, Stumbo, Paliokas, Hansen, & McWaters, 2010).

The failure of evaluation systems to provide accurate and credible information about individual teachers' instructional performance sustains and reinforces a phenomenon that is called the Widget Effect. The Widget Effect describes the tendency of school districts to assume classroom effectiveness is the same from teacher to teacher. This decade old fashioned fallacy fosters an environment in which teachers cease to be understood as individual professionals, but rather as interchangeable parts. In its denial of individual strengths and weaknesses, it is deeply disrespectful to teachers, in its indifference to instructional effectiveness, it gambles with the lives of students (The Widget Effect, p. 4). The Widget Effect is deeply ingrained in the fundamental systems and policies that govern the teachers in our public schools. Better evaluation systems may offer a partial solution, but they will not overcome a culture of indifference to classroom effectiveness. Reversing the Widget Effect depends on better information about instructional qualities that can be used to inform other important decisions that dictate who teaches in our schools (The Widget Effect, p. 7).

The System for Teacher and Student Achievement espouses itself to be more than just Widgets. In a 2011 report by Craig D. Jerald and Kristan Van Hook entitled, More Than Measurements, they cite ten lessons learned by designing a better teacher evaluation system which is TAP and they are listed accordingly.

1. Identify specific goals for teacher evaluation that can guide difficult system design decisions.
2. Use multiple, complementary measures-including student achievement gains to evaluate teachers.
3. Invest sufficiently in "wrap around" quality control mechanisms.
4. Train evaluators to conduct in depth post conferences that can help teachers improve their effectiveness.
5. Look for ways to provide teachers with targeted follow up support.
6. Identify deliberate strategies for integrating evaluation and professional development.
7. Include teacher leaders as well as administrators among evaluators.
8. Use an evidence based evaluation rubric that balances breadth and depth.

Attend to the "human side" of evaluation by offering teachers plenty of opportunities to understand how and why the new system works. Provide sufficient technical assistance to implement the system.

Crafting and evaluation system requires a great deal of thought about design tradeoffs, and implementing them successfully requires a significant investment in time and resources. "The journey to truly superior performance is neither for the faint of heart nor for the impatient," Ericson advises professionals who hope to develop high levels of expertise in their fields. "The development of genuine expertise requires struggle, sacrifice, and honest, often painful, self-assessment. There are no short cuts" (NIET, 2011).

We have learned that high quality professional development that is aligned with school goals, state and district standards increases overall student achievement (Birman et al., 2009; Cohen & Spillane, 1992). Professional learning activities are more likely to be effective if they are part of a coherent program of ongoing professional development (Cohen & Hill, 2000; Grant, Peterson, & Shojgreem-Downer, 1999). Garet (2001) also found that teachers reported greater change in their knowledge and skills when professional learning activities included the following components:

1. Built on what the teachers had already learned in related professional learning activities;
2. Emphasized content and pedagogy aligned with national, state and local standards, framework and assessments; and
3. Supported teachers in developing sustained ongoing professional communication with other teachers who were trying to change their teaching in similar ways.

Hill (2010) found that teachers develop expertise not as isolated individuals but through job embedded professional development, and as members of collaborative, interdisciplinary teams with common goals for student learning. Blank and Del las Alas (2009) confirmed the value of active learning methods with follow up after the initial period of training as well as the importance of collective participation. Coaching is one way to implement job embedded follow up and continuous feedback. Although findings on the impact of instructional coaches on student outcomes are limited (Garet, 2008; Lockwood, McCombs, & Marsh, 2010) research supports coaching as a powerful learning tool for teachers (Neufeld & Roper, 2003; Poglinco, 2003). Matsumura (2009)

found that school principals act as facilitators of this learning tool when they endorse the role of the instructional coach and have a more comprehensive understanding of what coaches do in working with teachers to ensure that they have adequate time in their schedule to participate. Coaches are most effective when given the autonomy to observe teachers' classrooms, identify their instructional needs and provide continuous feedback to teachers.

Budget cuts have become the norm, dampening the availability of funds and hindering efforts to enhance classroom practice through content-focused, long-term, job-embedded professional development. In an effort to provide assistance in addressing this issue, Odden, Archibald, Fermanich, and Gallagher (2002) created a cost framework for professional development that divides expenditures into six categories. Table 1 lists the cost elements, defines them, and explains how the costs are calculated.

Table 1

A Cost Structure for Professional Development

Cost Element	**Ingredient**	**How Cost Is Calculated**
Teacher Time Used for Professional Development	***Time Within the Regular Contract***	
	When students are not present before or after school or on scheduled in-service days, half days, or early release days	Teachers' hourly salary times the number of student-free hours used for professional development
	Planning time	The cost of the portion of the salary of the person used to cover the teachers' class during planning time used for professional development

	Time Outside the Regular Day/Year		
	Time after school, on weekends, or for summer institutes	The stipends or additional pay based on the hourly rate that teachers receive to compensate them for their time	
	Release time provided by substitutes	Substitute wages	
Training and Coaching	***Training***		
	Salaries for district trainers	Sum of trainer salaries	
	Outside consultants who provide training; may be part of comprehensive school reform design (CSRD)	Consultant fees or comprehensive school design contract fees	
	Coaching		
	Salaries for district coaches including on-site facilitators	Sum of coach and facilitator salaries	
	Outside consultants who provide coaching; may be part of CSRD	Consultant fees or comprehensive school design contract fees	
Administration of Professional Development	Salaries for district or school-level administrators of professional development programs		Salary for administrators times the proportion of their time spent administering professional development programs
Materials, Equipment, and Facilities Used for Professional Development	***Materials***		Materials for professional development, including the cost of classroom materials required for CSRDs
	Equipment	Equipment needed for professional development activities	
	Facilities	Rental or other costs for facilities used for professional development	
Travel and Transportation for Professional Development	***Travel***		Costs of travel to off-site professional development activities

	Transportation	Costs of transportation within the district for professional development
Tuition and Conference Fees	***Tuition***	Tuition payments or reimbursement for university-based professional development
	Conference Fees	Fees for conferences related to professional development

High quality professional development is a central component in nearly every modern proposal for improving education. Policy makers increasingly recognize that schools can be no better than the teachers and administrators who work in them. While these proposed professional development programs vary widely in their content and format, most share a common purpose: to "alter the professional practices, beliefs and understanding of school personnel toward an articulated end" (Griffin, 1983, p. 2).

Policy Implications and the TIF/TAP Alignment

In DeSoto Parish the district, spending per student of $17, 365 is higher than the state average of $13,774. The district spending per student has grown by 63% over four years. The district revenue per student is $17, 302 is higher than the state average of $14,187. The district revenue per student has grown 57% over four years. The spending is relative to current policy because all of the TAP schools are funded by the Teacher Incentive Fund (TIF). The TIF supports efforts to develop and implement performance based teacher and principal compensation systems in high need schools and has increased its award amount from an average of $200,000 to 5 million in 2006 to an average award amount of $500,000 to $12,000,000 in 2012. The total amount appropriated in 2006 was $99,000,000 versus the amount appropriated in 2012 of $249,433,000. The Louisiana Department of Education partnered with NIET to support the TAP system in seven local

educational agencies (LEAs): Ascension Parish, DeSoto Parish, Jefferson Parish, Pointe Coupe Parish, St. Mary Parish, Tangipahoa Parish and West Baton Rouge Parish. The Louisiana TAP program has grown from 19 TIF supported schools in 2010-11 to an anticipated 69 schools in 2012-13. The amount awarded to Louisiana Department of Education, NIET and seven local partner LEAs for five years was $49,000,000. As noted earlier some policy makers have expressed concerns about the lack of rigorous, independent research on the effectiveness of (TAP) The System for Teacher and Student Achievement or any other approach to teacher compensation reform and professional development (Hassell, 2002). Given the pace of policy proposals and investment in this area, the research needed to guide these investments is lagging. To date the research literature consists of no experimental studies and very few quasi-experimental studies, including (TAP) studies by Schacter et al. (2002).

In a speech made by President Barack Obama to the United States Hispanic Chamber of Commerce in March 2009, "he stated that increasing teacher and principal effectiveness one of the pillars of his education strategy and he also cited TAP as an example of a successful system for increasing teacher effectiveness in high-need schools". Further, Obama called for a significant increase in TIF funding in the American Recovery and Reinvestment Act, and in his FY2010 budget. In his proposed FY2010 budget, President Obama demonstrated his continued strong support for positive incentives and recognition of rewards for success when he recommended consolidating TIF into a new U.S. Department of Education program. The program is called the Teacher and Leader Innovation Fund and has a funding level of $950 million (*Washington Post*, 2009).

The goals of the TAP process and the requirements for TIF seem aligned, which is why of the approximate $240 million awarded through TIF in the fall of 2001, $88.3 million (36.80%) went to districts and states that proposed to implement TAP. This year NIET expanded its scope by awarding nearly $40 million in TIF grants to Iowa, Minnesota and Tennessee alone. In addition, the South Carolina Department of Education was awarded $24.7 million to expand and sustain its state level TAP infrastructure. The five-year award amount to Louisiana is $49,000,000. To this end, this study is compelled to examine the correlation between the goals and objectives of TAP and TIF.

The goals of the Teacher Incentive Fund follow:

1. Improving student achievement by increasing teacher and principal effectiveness.
2. Reforming teacher and principal compensation systems so that teachers and principals are rewarded for increases in student achievement.
3. Increasing the number of effective teachers teaching poor, minority, and disadvantaged students in hard to staff subjects as well as creating a sustainable performance based compensation systems.

The purpose of TIF is to foster Academic Improvement and Teacher Quality Programs by funding projects that develop and implement performance based teacher and principal compensation systems in high need schools. Concomitant, the performance based systems selected must consider gains in student academic achievement as well as classroom evaluations conducted multiple times during each school year among other factors and provide educators with incentives to take on additional responsibilities and leadership roles. Grantee Recipients must meet qualifications in the following areas:

Program District and Schools; Program Goals and Evaluations; Measurement and Incentive; Reward Structure; Using Evaluation Results to Inform high Quality Professional Development; Using Performance Based Compensation to Inform Key Personnel Decisions and Resources Sustainability. Broadly, TIF aims to support sustainable differentiated compensations systems that reward teachers and principals for increases in student achievement. In addition, TIF seeks to improve student achievement by increasing teacher and principals' effectiveness. The Teacher Incentive Fund supports programs that develop and implement performance based compensation systems (PBCS) for teachers and principals in high need schools.

The goals of TIF closely align to the mission and design of (TAP) The System for Teacher and Student Achievement. TAP is a comprehensive school reform model that leverages the expertise of effective teachers to increase the skills of teachers and students using the following model: Multiple Career Paths (MCP), Ongoing Applied Professional Development (OAPD), Instructionally-Focused Accountability (IFA), and Performance-Based Compensation (PBC). A close look at the criterion used for TIF reveals the following regarding the TAP model.

Criterion 1. "The extent to which the (PBCS) is part of the strategy for improving the process by which participating schools reward teachers and principals based on effectiveness, as determined by student growth."

The TAP system uses multiple valid measures to evaluate teacher and principal effectiveness in its (PBCS) *Performance-Based Compensation System*: value-added assessments and classroom observations. The TAP system, several state education agencies and many contemporary researchers use a statistical method called "value

added" to measure the contributions of teachers and schools to student achievement during a school year. This method requires matching each student's test scores to his or her own previous scores in order to measure the student's progress during the year—not only the student's attainment as of the end of the year. Value added separates the impact of a school year on a student from the student's prior experiences in and out of school, individual characteristics, socioeconomic status and family conditions. As a result, schools and teachers can become more accountable for how well they teach rather than how advantaged or disadvantaged their students were at the beginning of the year. To put it another way, value added tells you how much the school and teacher have contributed to student learning compared to other schools and teachers with similar students. Value-added data, measured at the classroom and school levels, accounts for half of teacher annual bonuses under the TAP Performance-Based Compensation System.

Master and mentor teachers are hired through a competitive, rigorous, performance-based selection process. These teacher leaders can be from within the school or from outside schools or districts. Master and mentor teachers must have expert curricular knowledge, outstanding instructional skills and the ability to work effectively with other adults. They take on additional responsibilities and authority, and are required to have a longer work year. Master and mentor teachers are held to a higher performance standard than the career teachers in their school, and are compensated accordingly. The TAP Leadership Team is comprised of the Principal, Master and Mentor Teachers. The TAP Leadership Team members drive school planning, lead weekly professional development sessions and become the trained teacher evaluators. Mentor and master teachers are compensated for taking on these responsibilities, earning an additional

$5,000 and $15,000 annually. Thus, in combination with annual performance bonuses, the most effective teachers in TAP schools may earn as much as $20,000 in Performance-Based Compensation.

Criterion 2. "The extent to which the (PBCS) has the involvement and support of teachers, principals, other certified personnel and unions."

NIET provides extensive training and support to the TAP state-based technical assistance teams, who in turn provide training to school-based TAP Leadership Teams. The training, support and oversight of the state TAP staff by NIET create the capacity to effectively implement TAP at scale. The high level of support schools receives from TAP state and district staff builds support among school administrators. In the case of smaller TAP projects, NIET's training staff may provide direct support to schools or districts. This support includes the use of the TAP Instructional Rubric used in teacher evaluations, the effective running of professional development cluster groups and more. The state/district teams support schools in the collection and analysis of teacher and student data. TAP state/district support staff also ensures the rigor of implementation through monitoring and evaluation of success.

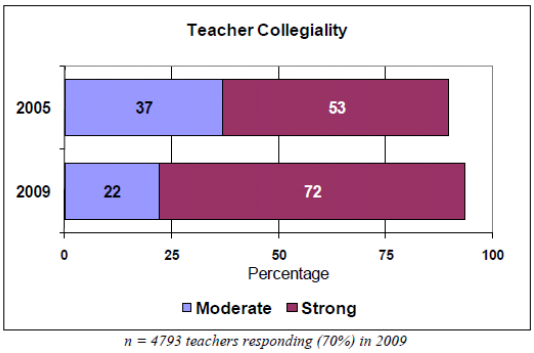

Figure 1. Teacher Collegiality.

Simultaneously, levels of support for the elements of TAP, including instructionally based accountability and performance based compensation are also high and growing, as shown in the following chart. When combined with professional growth in an applied, collaborative setting, accountability through classroom evaluations and performance-based compensation are compatible with increased collegiality. Whatever concerns teachers may have over the shift in culture to performance-based compensation and greater accountability are mitigated by the TAP cluster groups that provide teachers with a shared path toward improvement and naturally facilitate collegiality.

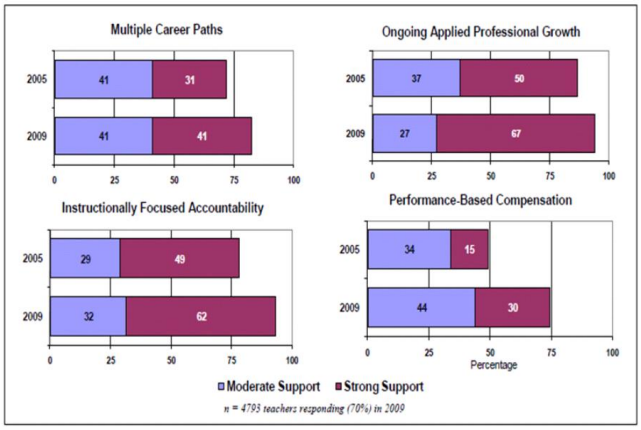

Figure 2. Support for TAP.

Criterion 3: "The extent to which the applicant includes rigorous, transparent and fair evaluation systems for teachers and principals that differentiate effectiveness using multiple rating categories that takes into account student growth and at least two classroom observations per year."

Teachers are evaluated by members of the TAP Leadership Team (principal, assistant principal(s), master and mentor teachers) four to six times a year in announced and unannounced classroom observations. To ensure the rigor of these observations, the TAP Leadership Team must undergo annual training and certification in the use of TAP's

rigorous classroom evaluation standards, known as the *TAP Skills, Knowledge and Responsibilities Performance Standards (SKR).* The SKR establishes a 26-indicator, research-based rubric of effective teaching, spanning the sub-categories of instruction, designing and planning instruction, the learning environment and responsibilities. The rubric offers a content-neutral, objective means to evaluate teacher effectiveness. Evaluators use a five-point scale, where a score of 1 indicates unsatisfactory performance and a score of 5 indicates exemplary performance on a particular indicator. All teachers are trained in the details of the rubric, and they know the standards to which they will be held before they are evaluated. They also receive extensive feedback on their performance through post-conferences following the evaluation. The table below illustrates one of the instructional indicators on the rubric. To ensure the fairness and consistency of evaluations, all evaluation data is entered into the TAP Comprehensive Online Data Entry (CODE) system. The CODE system allows TAP Leadership Teams to monitor inter-rater reliability of evaluators, scoring inflation or deflation, and will flag cases where there appear to be discrepancies in teachers' assigned evaluation scores.

Criterion 4: "The applicant includes a data management system that can link student achievement data to teacher and principal payroll and HR systems."

TAP provides state, district and school leaders with data and technology tools to provide a means for real-time monitoring of system implementation. Teacher evaluation data is entered into TAP's Comprehensive Online Data Entry (CODE) system to track teacher performance and monitor the inter-rater reliability of the evaluators. This system also facilitates monitoring of evaluations to ensure "grade inflation" or "grade deflation"

is not occurring. Any significant discrepancies between evaluators in scoring teacher evaluations are flagged and discussed.

Most TAP schools contract with independent, third-party providers of value-added analysis to process student achievement data on state assessments. Once testing is complete, the contractor receives the data and processes it, returning teacher- and school-level value-added scores to the school. As previously discussed, the school uses both the value-added and teacher evaluation data in awarding performance-based compensation.

Criterion 5: "The extent to which the applicant incorporates high-quality Professional Development activities that increase the capacity of teachers and principals to raise student achievement, and are directly linked to the specific measures of teacher and principal effectiveness included in the PBCS."

An essential element of the TAP system is ongoing, job-embedded professional development designed to support teachers in increasing their skills and effectiveness. Professional Development in TAP schools is provided by school-based expert master and mentor teachers. Every week, master and mentor teachers lead "cluster groups," small Professional Development sessions focused on instructional improvement for increasing student achievement. Master teachers present instructional strategies that they have "field-tested" and refined with students in that school, ensuring that strategies are tailored to the specific needs of students. Professional Development does not end with the cluster meeting. Teachers receive individualized support in their classrooms. Based on the needs of the teacher, this support may include a master or mentor teacher strategy in a classroom.

TAP Training

The implementation process begins with the selection of schools to want to implement the TAP model. Schools vote as an entire faculty and 80% of the staff has to agree to implement the TAP process. Once selected, the principal along with a designee from the State TAP office or NIET will interview and select the Master and Mentor teachers, which will comprise the TAP Leadership Team. The training for the Leadership Team referred to as TAP Core Training is done over a period normally starting in the summer in August and culminating in March at the National TAP Conference. The training is facilitated by an Executive Master Teacher assigned to each district by the State DOE. Since the entire Parish of DeSoto is implementing the TAP Model, they hired their own Executive Master Teacher whose office is located the Central Office at the school board. The training for the Leadership Team is as follows:

TAP Core Training (Day 1-5)

This five-day required training focuses on the basics of TAP implementation (evaluation, cluster, and leadership teams). REQUIRED: All members of a TAP Leadership Team MUST complete the introductory 5-day TAP Core Training.

TAP Core Training (Day 6) TAP Evaluator Certification

Day 6 of TAP Core Training provides additional training and support around the evaluation process, as well as an assessment based on the viewing of a video lesson, scoring of the lesson, and identification of refinement/reinforcement areas. Following completion of this training, participants are required to complete and submit a post conference plan to support the teacher in the video.

TAP Core Training (Day 7) Connecting the Rubrics; Designing, Planning, and Learning Environment

Day 7 of TAP Core Training provides additional training and support around all three TAP instructional rubrics. During this workshop, participants will deepen their understanding of the connections across all rubrics. They will determine how and when evidence can be collected, apply knowledge by analyzing a lesson plan, and view a lesson to collect evidence. This workshop strengthens the evaluation process.

TAP Core Training (Day 8) Field Testing

In this workshop, participants will discover how to plan and implement an effective field test in preparation for Cycle 2 clusters. This training is integral to effective selection of student strategies to support continued student achievement.

Additional Training

Building TAP Knowledge, Skills and Understanding Workshop

Facilitated by the Executive Master Teacher these daylong workshops are provided to TAP master teachers, mentor teachers, principals, district leaders, and network coaches. The topics covered included the following:

1. Leveraging Student Work to Increase the Effectiveness of Clusters and Field Testing;
2. Leveraging Student Work to Better Understand Teaching Standards and Rubrics; and
3. Utilizing Student Work to Inform Effective Feedback at Multiple Levels: Coaches, Teachers, and Students.

Principal Support Webinars

TAP Principals and Assistant Principals are invited to participate in Principal Support webinars. These webinars are designed to provide TAP school leaders with information to support their TAP implementation efforts. These webinars are generally held twice a year in January and April.

The training of TAP Leadership Teams is vital to the implementation of the TAP Process. It is designed for TAP Leadership Team members to not only know their roles and responsibilities but also to interact with other TAP Teams to discuss the implementation process relative to teacher effectiveness and increased student achievement.

TAP Implementation

At its most simplistic level, the implementation of the TAP model involves the following components:

1. TAP Leadership Team members knowing their roles and responsibilities.
2. How to develop a school plan, goals and assessments
3. Facilitating job embedded professional develop called clusters that include (IGP's) Individualized Growth Plans
4. Conducting effective evaluations that causes teachers to grow professional with the result being increased student achievement.

The Role of the Leadership Team:

The role of the leadership team and of the individual members within the leadership team is clearly defined by the four essential tasks of EVERY leadership team:

1. To develop and monitor progress toward meeting school plan goals leading to increased student achievement.
2. To plan for and monitor effective cluster operations that directly lead to increased teacher proficiency and student achievement in specific areas of need.
3. To plan and implement an evaluation and post-conference schedule while continually working to strengthen each team member's skill with evaluating and conferencing, and to use the data from the evaluations to monitor and address score inflation.
4. To monitor Individual Growth Plans, how they are supported, and movement toward meeting both student achievement and teacher improvement goals.

These activities should be documented on the Leadership Team Meeting Log. In addition to these four roles, teams may also have other areas that they address during leadership team meetings, however, the meetings must focus on factors that directly increase student achievement. If the leadership team is spending too much time on elements other than those listed above, it is very likely that the team is not focused on monitoring and implementing the various aspects of TAP, which are designed to increase student achievement. In other words, the other areas that leadership teams feel they need to address during these meetings must be *in addition* to the essential tasks listed above (TAP Handbook, 2006).

The Role of the Building Principal

The principal in a TAP school must be a strong instructional leader and an expert administrator. Utilizing his or her knowledge of the TAP processes, this person advances the vision of increased student achievement. In order to do so, a TAP principal must be at least "proficient" in the following skills:

1. developing an exemplary instructional and academic improvement plan,
2. analyzing and communicating student progress, and
3. exhibiting instructional leadership with knowledge of both quality instructional practices and curriculum.

The building principal is the primary instructional leader in a TAP school. As such, their personal involvement in TAP as a role model, communicator of the vision, and primary voice behind the school plan is significant in maintaining the quality of each of the TAP elements within the school. This is visibly evident when principals regularly do the following:

1. promote a "can-do" attitude that builds a belief among the staff that all students can achieve at higher levels and that all staff can work together to meet the school goals;
2. design staff meeting activities that (a) use data analysis to develop cluster goals, (b) support professional development and cluster topics, (c) score common student assessments to ensure inter-rater reliability with state assessments, (d) hold celebrations of "short-term wins" in student growth through reporting quarterly student growth, and (e) fosters intra-cluster communication regarding

what and how they have accomplished in measurable student achievement gains;

3. participate in, observe, and evaluate cluster groups followed by coaching the cluster leader;
4. ask staff about their IGP progress and measurable student achievement gains;
5. participate in evaluating teachers and monitor evaluation score inflation by all leadership team members;
6. observe and conduct evaluation post-conferences;
7. confront behaviors not aligned with the school vision or leadership team efforts to implement the school plan; and
8. prominently display charts, tables, and graphs of student growth and performance (TAP Handbook, 2006).

The Role of the Master Teacher

Master teachers function in a unique manner relative to traditional teachers. Working with the principal, the master teacher's primary role is to analyze student data, as well as to create and institute an academic achievement plan for the building. Master teachers lead cluster groups and provide demonstration lessons, coaching, and team-teaching to career teachers. They also spend, on average, two hours per day teaching students. Master teachers collaborate to determine and to develop the adoption of learning resources and curriculum. They are partners with the principal in evaluating other teachers. Master teachers may also partner with the principal in sharing some of the responsibility of interacting with parents (TAP Handbook, 2006).

The master teachers are charged with "making it happen" by turning the school plan into action. Their duties include five main areas:

1. Leadership Team Participation: Responsible for the overall TAP implementation. Monitor goal setting, activities, classroom follow-up and goal attainment for cluster groups and individual growth plans. Assess teacher evaluation results and maintain inter-rater reliability.
2. Research: Locate research-based strategies that will support student achievement in the identified areas of student need as revealed from the analysis of data.
3. Cluster Group Planning and Implementation: Jointly develop, with mentor teachers, weekly cluster group agendas and activities. Co-lead and attend selected cluster meetings weekly. Assess all cluster group progress toward goals utilizing student data.
4. Individual Growth Plan Management: Assist teachers in developing goals and check progress toward goals at evaluation post conference. Provide training, resources, and support for meeting goals.
5. Evaluations and Conferencing: Conduct classroom evaluations and conferences for both formal and informal observations.
6. Classroom Follow-up: Provide support to career teachers as it relates to cluster and IGP learning. This includes observations and feedback, model teaching (i.e., demonstration lessons), and team teaching (TAP Handbook, 2006).

The Role of the Mentor Teacher

Mentor teachers are actively involved in enhancing and supporting the career teachers' teaching experience. Through the leadership team, they participate in analyzing student data and creating academic achievement plans. With oversight and support from the master teacher, they lead cluster meetings and as a result, mentor teachers provide classroom-based follow-up and extensive feedback on career teachers' instructional practices. With the input and guidance of the master teacher, mentor teachers plan for instruction in partnership with other mentor teachers and career teachers. Mentor teachers also engage in self- and team-directed professional development activities (TAP Handbook, 2006).

Mentor teachers have many of the same responsibilities as master teachers, but the quantity and frequency of those responsibilities is lessened. For example, while a master teacher may conduct 25 evaluations in a given school, the mentor may have only eight. The master teacher may be responsible for planning and facilitating four cluster meetings while the mentor teacher may co-plan or facilitate one cluster with the master. A mentor teacher's duties include:

1. Leadership Team Participation: Responsible for the overall TAP implementation. Monitor goal setting, activities, classroom follow-up and goal attainment for cluster groups and individual growth plans. Assess teacher evaluation results and maintain inter-rater reliability.
2. Cluster Group Planning and Implementation: Jointly develop with master teachers weekly cluster group agendas and activities. Co-lead weekly cluster meetings. Maintain cluster group records.

3. Individual Growth Plan Support: Provide material resources, ideas, and suggestions for achieving individual growth plan goals.
4. Evaluations and Conferencing: Conduct formal and informal classroom evaluations and conferences.
5. Coaching: Regularly work with career teachers to provide follow-up coaching related to cluster group learning or on individual teaching skills based on evaluation data.
6. Team Teaching and Planning: Model or team-teach in area of expertise as called for by cluster group goals or individual teacher goals.

These areas illustrate the overall day-to-day duties that master and mentor teachers conduct. It is important to note that schools need to demonstrate flexibility in defining and adjusting the explicit responsibilities and assignment loads for master and mentor teachers, so that the specific needs of the students and teachers at THAT school are met (TAP Handbook, 2006).

The School Plan

The school achievement plan comprehensively addresses how teachers and the leadership team will increase student achievement on the end-of-year assessments. The plan focuses on achieving annual student goals through the application of research-based, field tested instructional student strategies and measuring student progress in achieving those goals via benchmark assessments, teacher-made assessments, and ongoing formative assessments that are aligned to the high stakes test. The school plan is a *living* document that provides the focus and direction for the school. It is the "map" clusters use to guide members to reach the school goal "destination." If student needs change, then

the “map” for how to get to the “destination” should change as well (TAP Handbook, 2006).

Leadership team members use the school plan to regularly monitor progress toward meeting the measurable student achievement goals using frequent measures of student performance in specific skills. Leadership team members should include formal assessments, such as benchmark exams to measure periodic progress, but they should also include ongoing examination of student work through the application of research-based, field tested instructional strategies in the classroom. The school plan should also be used to monitor the quality and effectiveness of TAP processes (Cluster, IGP, mentor/master support, and evaluation processes) and the development of the STEPS for Effective Learning within these processes (TAP Handbook, 2006).

Ultimately, the school plan should help teachers answer the following three questions before the administration of the high stakes test:

1. How do you use assessment data to drive instructional improvement?
2. Will your students show growth on specific areas of the annual state assessment?
3. Based on your assessment data, how do you know that your students continuously grow in their academic performance?

Not all school plans will look the same. School plans vary depending on the size, configuration of the school, and the individual student needs within it. Effective school plans, however, all share very important characteristics:

1. Goals aligned at multiple levels within the school;
2. Assessments aligned at multiple levels within the school;

3. Alignment between the goals and assessments being used; and
4. Strategies proven to increase student achievement in the identified area of academic need.

While these are general characteristics, a more detailed explanation of specific elements is provided in the following sections. The more specific the school plan, the better clusters will be able to increase student achievement. The focus for clusters is on strategies designed to meet the needs revealed by the analysis of student work. This requires that the assessments and strategies be carefully aligned with the school and cluster goals, and ultimately with the high-stakes test. Goals within the school must be based on specific student needs and written in terms of measurable student outcomes. The more specific the goals within the school, the closer the teachers get to the level of classroom application for improvement of student learning (TAP Handbook, 2006).

The school plan applies three levels of goals to bring into focus identified instructional and student needs:

1. School-wide goals;
2. Yearly cluster goals; and
3. Cluster cycle goals in a more specific area within their yearly goal.

It is imperative that a school aligns these three levels of goals. By doing so, the leadership team ensures that the cluster-level or classroom-level work translates to overall success on the school goal. This alignment should be consistently communicated to all cluster members to focus the work toward improved achievement. An example of each goal level is provided below.

School goals identify general trends among large groups of students and overall achievement levels within sub-groups of students in the school. Often times, they are aligned to the requirements of meeting the Annual Yearly Progress (AYP) target (TAP Handbook, 2006).

School goals effectively communicate the overall achievement level of the school. However, due to the distance from individual student needs, the school goals are not specific enough to accurately define and measure the work done in cluster. Because of this, they move the leadership team towards defining more specific yearly cluster goals and cluster cycle goals matched directly to cluster members' individual students (TAP Handbook, 2006).

The critical elements of a school goal are as follows:

1. The goal is based on high stakes test (state or district test).
2. The goal is based on area of students' greatest academic need (language arts, math, etc.).
3. The goal is measurable.
4. The goal includes increasing and/or maintaining proficiency levels of all students and at least a year's growth for all students.
5. An example of a clearly written school goal is, "Grade 4 students will increase from 3% advanced to 5% advanced, 17% proficient to 20% proficient, 35% basic to 45% basic, and 45% below basic will decrease to 35% below basic."

6. Grade 5 students will increase from 1% advanced to 3% advanced, 5% proficient to 8% proficient, 38% basic to 48% basic, and 56% below basic will decrease to 46% below basic.
7. Grade 6 students will increase from 3% advanced to 5% advanced, 13% proficient to 16% proficient, 38% basic to 46% basic, and 56% below basic will decrease to 48% below basic (TAP Handbook, 2006).

Yearly cluster goals are aligned to the school-wide goals and are made measurable using periodic benchmark or teacher-made assessments. They move the broad school goal to a more focused one. Yearly cluster goals are a means of measuring how students are progressing toward meeting the school goal. In order to act as predictors for how students are progressing towards the school goal, the benchmarks and/or assessments need to be aligned to the high stakes test against which the school goal is being measured. Each cluster group in a school has its own yearly cluster goal (TAP Handbook, 2006).

Within the course of a year, a cluster group engages in several cluster cycles. Each cluster cycle includes a unique goal. Cluster cycle goals are subject to change as new information from the benchmarks becomes available. If the information stemming from the benchmark assessments is not specific, timely, or available, then information from teacher-made assessments is needed to establish cluster cycle goals (TAP Handbook, 2006).

Cluster cycle goals are established using the assessment data available specific to the cluster members' individual students. This specificity should allow teachers to make

quality instructional decisions about what interventions are needed to best address student needs (TAP Handbook, 2006).

Assessments Measuring of Learning

Ultimately, the leadership team should consider the following essential questions:

1. How do you use assessment data to drive instructional improvement?
2. Will my students show growth on the annual state assessment based on the interventions, benchmark data, and teacher made test data? How do I know?
3. How do I know that my students are growing continuously in their academic performance?

The school plan applies the following three levels of assessments to bring into focus instructional needs and to measure student gains:

1. State/District Level Assessments;
2. School/Benchmark Assessments; and
3. Teacher-Made Classroom Assessments including daily formative assessments

It is important to note that for these assessments to be utilized as predictors of students' progress toward reaching the school goal; they must be aligned to each other and to the high stakes test (TAP Handbook, 2006).

The following graphic demonstrates the use of these three levels of assessments to narrow the focus of cluster work on a specific identified student need.

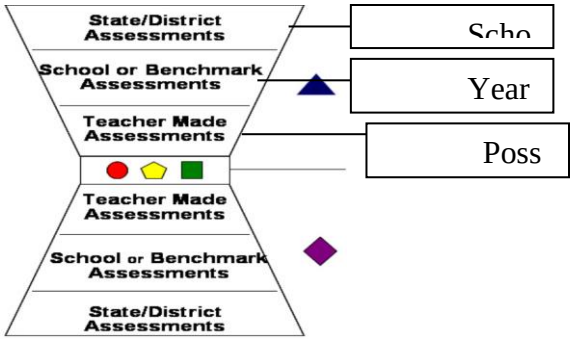

Figure 3. Levels of Formative Assessments.

CHAPTER III

Methodology

Introduction

The purpose of this study was to investigate whether or not the implementation of The System for Teacher and Student Achievement (TAP) in three schools in Louisiana that are funded by the Teacher Incentive Fund have an impact on teacher effectiveness. The three schools in this study were located in the DeSoto Parish School District and had implemented The System for Teacher and Student Advancement Program Years and Beyond. To determine what extent job embedded professional development has on teacher quality and teacher effectiveness. This study specifically examined a version of the Teacher Attitude Survey model developed by the National Institute for Excellence in Teaching to determine (TAP's) implementation and impact on teacher effectiveness. To determine the impact of (TAP) relative to Student Achievement Standardized Test Scores, ILEAP/LEAP were used in the areas of English Language Arts and Math for 3rd-8th grades, comparing the 2009 school year test results, which was Pre-TAP, to the 2014 school year test results, which was Post-TAP. DIBELS data were used to determine the impact of Student Achievement in grades PreK-2nd for the same corresponding years of Pre and Post TAP implementation. Relative to (TAP's) impact on Student Achievement an ANOVA was also used comparing (2009) Standardized Test Scores in grades 3rd-8th to (2014) Test Scores. An ANOVA was also used to measure DIBELS data for the same corresponding years for grades PreK-2nd.

Kathy Noel, director of curriculum and instruction for Desoto Parish schools, said that the average cost there is about $445,000 per school. The district has been able to fund the initiative through a combination of money from federal Title 1, Teacher Incentive Funds, School Improvement Funds 1003G, the Individuals with Disabilities Education Act, Title II, and local funds.

TAP was first introduced into Louisiana schools during the 2003-2004 academic year. Beginning with just five schools in three parishes, the program expanded to 28 schools in ten parishes during the 2008-2009 school year. It continues to grow, with 38 schools for the 2014-2015 school year. This is about 3% of Louisiana schools. Also, in the upcoming school year, another 26 schools are participating in the Louisiana "Pre-TAP" initiative, in which they will learn about the TAP process. It is anticipated that many of the Pre-TAP schools will become TAP schools in the 2015-2016 school year, bringing to almost 5% the proportion of Louisiana schools served by TAP.

DeSoto Parish implemented The System for Teacher and Student Achievement district wide in 2011-2012. Concomitant, in the 2011-2012 school year DeSoto Parish was recognized as the most improved school district in the state, increasing its rating from D to B. DeSoto Parish represents one of the first district wide implementations of TAP. The three schools selected for the case study are: North DeSoto PreK-Elementary, North DeSoto 3-5 Elementary and North DeSoto Middle School all of which are TIF Funded and have have been implementing the model for three years or more. North DeSoto Pre-K and North DeSoto 3-5 have completed four years and North DeSoto Middle has completed six years. These schools were also selected because they each

serve as a feeder school for the other which should show a stronger correlation relative to student achievement.

District Accountability in Louisiana

As we examine the data it is important to understand the unique system that Louisiana uses and more importantly how the calculation of scores changed with the addition of Letter Grades and how whether or not the impact of the three schools in this case study.

District Performance Scores (DPS) in Louisiana is a composite of a school district's individual student scores on the LEAP, iLEAP and Graduation Exit Exam as well as attendance and dropout rates, and graduation outcomes. District Performance Scores are calculated with the same formula as School Performance Scores, but use on year of data, as if the district is one large school. In the 2010-2011 school year, Louisiana began assigning districts and schools letter grades. Table 2, indicates which letter grades correspond to the District School Performance Scores and are based on the following grading scale:

Table 2

Accountability Letter Grade Range and Student Percentages

Letter Grade	SPS Range (2010-2011)	Approx. % of Students Below Basic
A	120.0-200.0	0-12%
B	105.0-119.9	13-24%
C	90.0-104.9	25-36%
D	65.0-89.9	37-61%
F	0-64.9	62-100%

In the 2012-2013 school year, the Louisiana Department of Education changed the way schools were graded by aligning with higher standards, rewarding the gains schools have already made, and focusing on students below grade level. An example of the conversion scale is listed in Table 3.

Table 3

Comparative Letter Grade Range Scales

Old Scale	New Scale
A (120-200)	A (100-150)
B (105-119.9)	B (85-99.9)
C (90-104.9)	C (70-84.9)
D (75-89.9)	D (50-69.9)
F (0-74.9)	F (0-49.9)

The calculations for achieving score also changed. Currently No Points are earned by students scoring below basic on their respective state test as indicated in Table 4.

Table 4

Comparative Proficiency Level Calculations

Old Calculation	New Calculation
Advanced (200)	Advanced (150)
Mastery (150)	Mastery (125)
Basic (100)	Basic (100)
Approaching Basic (50)	Approaching Basic (0)
Unsatisfactory (0)	Unsatisfactory (0)

Schools with an "A" must earn 5 bonus points or grows 5 points from the old system. Schools with a "B-F" label must earn 10 bonus points or grow 10 points from the old system, as reported in Table 5.

Table 5

Comparative Formula for Bonus Points

Old Calculation	New Calculation
Elementary (K-6) 90% Test + 10% Attendance	Elementary (K-6) 100% Tests
Middle School (K-8) 90% Test + 5% Attendance + 5% Dropout	Middle School (K-8) 95% test + 5% High School Credits Earned by End of Freshman Year
High School (9-12) 70% Test + 30% Graduation Rate	High School (9-12) 25% ACT Composite + 25% End of Course + 25% Graduation Rate +25% Quality Diploma
Combination School Average of : (K-8 SPS X # Students) + (HS SPS X # Students)	Combination School Average of : (K-8 SPS X # Students) + (HS SPS X # Students)

Participants in this study included three schools in DeSoto Parish that implemented the Teacher Advancement Program model. DeSoto Parish is a rural parish located in North West Louisiana. The district student population of 4,918 students has stayed relatively flat over five years. The district spending per student of $17, 365 is higher than the state average of $13,774. The district spending per student has grown by 64% over four years. The district revenue per student of $17, 302 is higher than the state average of $14,187. The district revenue per student has grown 57% over four years.

Currently there are sixty-six schools implementing the TAP model in the State of Louisiana. The DeSoto Parish school system is composed of eleven schools, all of which

implement the TAP model. The DeSoto Parish school system is located in Logansport, Louisiana and serves a population of 4,918 students being taught by 372 teachers in a configuration of four elementary schools, five middle schools, and two high schools. The student teacher ratio 13:1 is less than the state average of 14:1. Minority enrollment is 51% of the student body (majority Black), which is less than the Louisiana state average of 54%. The three schools chosen for this study, North DeSoto PreK, North De Soto Elementary 3-5, and North DeSoto Middle 6-8, were selected because they all serve as feeder schools to one another. They are three different schools located on the same campus. As previously mentioned they are all TAP schools have used the model for three years and beyond and are funded in part by TIF.

DeSoto Parish implemented TAP district wide in 2011-2012. Concomitant, in the 2011-2012 school year DeSoto Parish was recognized as the most improved school district in the state, increasing its rating from D to B. The three schools selected for the case study are: North DeSoto PreK-Elementary, North DeSoto 3-5 Elementary and North DeSoto Middle School all of which are TIF Funded and have been implementing the model for three years or more. North DeSoto Pre-K and North DeSoto 3-5 have completed four years and North DeSoto Middle has completed six years.

North DeSoto Elementary PreK-2 serves 570 students in grades PreK-2. The minority enrollment is 24% of the student body (majority black), which is less than the state average of 54%. The schools free and reduced lunch enrollment is 51% which is lower than the states average of 68%. The gender is 52% male and 48% female. The school's diversity score of 0.39 is less than the state average of 0.56. The student teacher

ratio of 14:1, which is equal to the state average of 14:1, has stayed the same over five years (NCES, 2014).

North DeSoto Elementary School 3-5 serves 479 students in grades 3rd-5th. The minority enrollment is 23% of the student body (majority black), which is less than the state average of 54%. The schools free and reduced lunch enrollment is 52% which is lower than the states average of 68%. The gender is 53% male and 47% female. The school's diversity score of 0.37 is less than the state average of 0.56. The student teacher ratio of 15:1 is higher than the state average of 14:1 and has decreased from over the last five years (NCEs, 2014).

North DeSoto Middle School 3-8 serves 486 students in grades 6th-8th. The minority enrollment is 28% of the student body (majority black), which is less than the state average of 54%. The schools free and reduced lunch enrollment is45% which is lower than the states average of 68%. The gender is 53% male and 47% female. The school's diversity score of 0.43 is less than the state average 0.56. The student teacher ratio of 16:1 is higher than the state average of 14:1 and stayed the same over the last five years (NCEs, 2014).

The data in Tables 5-7 below is taken from district information as reported by the Director of Professional Development for DeSoto Parish Public Schools indicating the numbers of Master, Mentor and Career Teachers at each school as well as the ratio of Master and Mentor Teachers that support Career Teachers. I have included the numbers from the High School even though it is not included in this study so as to give a more complete picture of the configuration of schools that feed each other. Table 5 indicates the number of Master, Mentor and Career Teachers for the 2013-2014 school year. Table

6 indicates the number of Master, Mentor and Career Teachers for the 2012-2013 school year. Table 7 is a comparison of the years 2012-2013 to 2013-2014 for the numbers of Master, Mentor and Career Teachers for each school.

Table 6

Number and Classification of Teachers Assigned Per School for 2013-2014

TAP 2013 – 2014

	Master	Mentor	Career
North DeSoto Pk-2	2	4	37
North DeSoto 3-5	2	3	28
North DeSoto Middle School	2	4	27
North DeSoto High School	2	6	37
TOTAL	8	17	129

Table 7

Number and Classification of Teachers Assigned Per School for 2012-2013

TAP 2012 – 2013

	Master	Mentor	Career
North DeSoto Pk-2	3	5	41
North DeSoto 3-5	2	4	29
North DeSoto Middle School	2	4	31
North DeSoto High School	3	6	38
TOTAL	10	19	139

Table 8

Comparison Numbers and Classification of Teachers Per School for 2012-2014

TAP

	Master		Mentor		Career	
	12-13	13-14	12-13	13-14	12-13	13-14
North DeSoto Pk-2	3	2	5	4	41	37
North DeSoto 3-5	2	2	4	3	29	28
North DeSoto Middle School	2	2	4	4	31	27
North DeSoto High School	3	2	6	6	38	37
TOTAL	10	8	19	17	139	129

Instrumentation

A Likert-Type Scale was used to quantify the constructs of the survey questions in the context of the research questions posed relative to the impact and implementation of The System for Teacher and Student Achievement at the three schools. The Likert scale's invention is attributed to Rensis Likert (1931), who described this technique for assessments of attitudes. McIver and Carmines (1981) described the Likert scale as a set of items, composed of approximately an equal number of favorable and unfavorable statements concerning the attitude object, is given to a group of subjects. They are asked to respond to each statement in terms of their own degree of agreement or disagreement. Typically, they are instructed to select one of five responses: *strongly agree*, *agree*, *undecided*, *disagree*, or *strongly disagree*. The specific responses to the items are combined so that individuals with the least favorable attitudes will have the highest scores while individuals with the least favorable or unfavorable attitudes will have the

lowest scores. While not all summated scales are created according to Likert's specific procedures, all such scale share the basic logic associated with Likert scaling (pp. 22-23).

Data Collection

Letters of Solicitation were sent to the State TAP Director, District Executive Master Teacher, NIET and Superintendent giving consent to obtain the Teacher Advancement Program Attitude Survey. TAP Attitude Survey data were examined during the implementation period of 2010-2011; 2011-2012 and 2012-2013. The principals and teachers were given a survey using a Likert- Type Scale to complete regarding the implementation of the TAP model. The survey was given with the consent of the Superintendent. The surveys were allowed to be disseminated by the researcher during faculty meetings at the following schools on the respective dates: North DeSoto PreK-2nd; November 3rd, North DeSoto Elementary 3rd-5th; November 10th and North DeSoto Middle School, November 17th. Each school was given a week to complete the surveys and were retrieve by the researcher Friday of each respective week. No names were used on the survey, only the respondent's role regarding the TAP model be it Principal, Master, Mentor or Career Teacher.

Data Analysis

This case study poses three questions regarding the implementation and impact of The System for Teacher and Student Achievement in three schools in DeSoto Parish that utilize the TAP Model. Cronbach's Alpha the coefficient of reliability that was be used to measure the internal reliability and consistency of the questionnaire for the Pre-Analysis. This measure was used because validity and reliability are two fundamental elements in the evaluation of a measurement instrument. Concomitant, in the context of Pre-Analysis

the question must be posed and answered as regarding how Administrators, Master Teachers, Mentor Teachers and Career Teachers rate the various components of TAP and were there significant differences among them? In order to determine this a one-way Analysis of Variance with Post Hoc testing was used to determine if there were any significant differences between the three schools in staff satisfaction

With regards to Question 1—To what extent are there differences between the three schools regarding the various components of The System for Teacher and Student Advancement?—an ANOVA was applied to determine the extent to which there were differences between the three schools in the various components of The System for Teacher and Student Achievement as it relates to implementation. A Post Hoc analyses was used to detect if there were differences between the three schools. In cases where there is no statistical significance there is no need to provide a Post hoc interpretation.

Relative to question two which states; to what extent are there differences between Master, Mentor and Career Teachers feeling with regards to implementation Kurskal Wallis was used. The Kruskal-Wallis test is named after William Kruskal and W. Allen Wallis is often used to test the reliability and validity of the questions being posed. An ANOVA was applied to determine how Master, Mentor and Career Teachers feel regarding implementation. An ANOVA compares two types of variances: the variance within each sample and the variance between difference samples.

To determine the extent to which the implementation of TAP had an impact of student achievement a t-test was used to determine if there was a significant difference between student achievement for Pre-TAP 2009 to Post-TAP 2014. Levene's test for the equality of variance was done before that to verify the assumptions necessary for the t-

test. Chi-Square was used to if there was a significant difference between the variables of 2009-2014.

Cronbach's alpha is the coefficient of reliability that was be used to measure the internal reliability and consistency of the questionnaire. Validity and reliability are two fundamental elements in the evaluation of a measurement instrument. Instruments can be conventional knowledge, skill or attitude tests, clinical simulations or survey questionnaires.

Cronbach's alpha is the coefficient of reliability that was be used to measure the internal reliability and consistency of the questionnaire. Validity and reliability are two fundamental elements in the evaluation of a measurement instrument. Instruments can be conventional knowledge, skill or attitude tests, clinical simulations or survey questionnaires. Instruments can measure concepts, psychomotor skills or affective values. Validity is concerned with the extent to which an instrument measures what it is intended to measure. Reliability is concerned with the ability of an instrument to measure consistency. The reliability of an instrument is closely associated with its validity. An instrument cannot be valid unless it is reliable. However, the reliability of an instrument does not depend on its validity. It is possible to objectively measure the reliability of an instrument by using Cronbach's alpha.

Alpha was developed by Lee Cronbach in 1951 to provide a measure of the internal consistency of a test or scale it is expressed as a number between 0 and 1. Internal consistency describes the extent to which all the items in a test measure the same concept or construct and hence it is connected to the interrelatedness of the items within the test. Internal consistency should be determined before a test can be employed for

research. In addition, reliability estimates show the amount of measurement error in a test. Simply out, this interpretation of reliability is the correlation of test with itself. Squaring this correlation and subtracting from 1.00 produces the index of measurement error. For example, if a test has a reliability of 0.80, there is a 0.36 error of variance (random error) in the scores (0.80x0.80=0.64=0.36). As the estimate of reliability increases, the fraction of a test score attributable to error decreases. The reliability of a test reveals the effect measurement error on the observed score of a student cohort rather than on an individual student. If the test is correlated to each other, the value of alpha is increased. Alpha is an important concep in the evaluation of assessments and questionnaires and alpha is a commonly employed index of test reliability. An ANOVA was applied to determine how Master, Mentor and Career teachers feel regarding implementation.

A one-way ANOVA was used to measure the means of the three schools regarding their differences and a Post Hoc analysis was done to indicate which of the three schools differ from one another and Kurskal Wallis was used to determine to what extent were there differences between the Master, Mentor and Career Teachers.

The Research Questions

Three research questions are posed regarding the implementation and impact of The System for Teacher and Student Achievement in three schools in DeSoto Parish that utilize the model.

Implementation Questions

1. To what extent are there differences between the three schools regarding the various components of The System for Teacher and Student Achievement?

2. To what extent are there differences between Master, Mentor and Career Teachers feeling with regards to implementation?

Impact Question

4. To what extent did The System for Teacher and Student Achievement affect Student Achievement?

The areas that the research questions examined in the context of TAP were the following:

1. Ongoing Applied Professional Development *(OAPD)*;
2. Multiple Career Paths (*MPC)*;
3. Collegiality *(COL)*;
4. Instructionally Focused Accountability (*IFA)*;
5. Performance Based Compensation *(PBC)*;

Summary

The purpose of this study is to investigate whether or not the implementation of The System for Teacher and Student Achievement in three schools in Louisiana that are funded by the Teacher Incentive Fund have an impact on teacher effectiveness and student achievement. The three schools in this study were located in the DeSoto Parish School District and include schools that have implemented the Teacher Advancement Program Three Years and Beyond. To determine the impact of teacher effectiveness this study examined sample questions from the TAP Attitude Survey Results, which are required by the National Institute for Excellence in Teaching for the school years 2010-2013.

CHAPTER IV

Research Findings

This chapter discusses the results of the study regarding the implementation and impact of The System for Teacher and Student Achievement at North DeSoto PreK-2nd, North DeSoto Elementary 3rd-5th and North DeSoto Middle Schools for the 2009-2010 and the 2013-2014 school years. Each school has been implementing the TAP model for a minimum of three years having begun in the 2010-2011 school year.

The Survey consists of 32 questions across five different domains. There were no open-ended questions nor were participants allowed to write additional notes to describe their answers. Domain 1 is Ongoing Applied Professional Development (OAPD), which consists of five questions. Domain 2 is Multiple Career Paths (MCP), which consists of four questions. Domain 3 is Collegiality (COL), which consists of nine questions. Domain 4 is Instructionally Focused Accountability (IFA), which consists of five questions. Domain 5 is Performance Based Compensation, which consists of nine questions.

Respondents were to answer questions in the following areas relative to TAP implementation:

1. Ongoing Applied Professional Development (*OAPD*);
2. Multiple Career Paths (MCP);
3. Collegiality (COL);
4. Instructionally-Focused Accountability (IFA); and

5. Performance-Based Compensation (PBA).

The Tables below reflect the participants at each school that answered the questions in the survey from the perspective of their position in the context of the implementation process. The positions at each school are Administrator, Master Teacher, Mentor Teacher and Career Teacher. Tables 8-10 reflect the numbers of participants that responded to the survey at each school and the percentages of them that responded by category while Table 4 reflects the overall total from the combined schools.

Respondents to the TAP Survey

Table 9 reflects the number as well as the overall percentage of participants specifically at North DeSoto Prek-2nd that responded to the survey that was distributed to them in faculty meeting. Of the 43 possible participants, 30 or 70% responded to the survey.

Table 9

Number and Percentage of Survey Respondents for PreK-2nd

Respondents	Number	Percentage
Administrators	2 of 2	100%
Master Teachers	1 of 2	50%
Mentor Teachers	3 of 4	75%
Career Teachers	24 of 35	68%
Total	30 of 43	70%

Table 10 presents the number as well as the overall percentage of participants specifically at North DeSoto Elementary 3rd-5th grade that responded to the survey that

was distributed to them in faculty meeting. Of the 34 possible participants, 33 or 97% responded to the survey.

Table 10

Number and Percentage of Survey Respondents for 3rd-5th

Respondents	Number	Percentage
Administrators	2 of 2	100%
Master Teachers	2 of 2	100%
Mentor Teachers	4 of 4	100%
Career Teachers	25 0f 26	96%
Total	33 of 34	97%

Table 11 presents the number as well as the overall percentage of participants specifically at North DeSoto Middle 6th-8th grade that responded to the survey that was distributed to them in faculty meeting. Of the 38 possible participants, 17 or 45% responded to the survey.

Table 11

Number and Percentage of Survey Respondents for 6th-8th

Respondents	Number	Percentage
Administrators	2 of 2	100%
Master Teachers	2 of 2	100%
Mentor Teachers	1 of 4	25%
Career Teachers	12 of 30	40%
Total	17 of 38	45%

Table 12 reflects the total numbers of participants combined from each school by category and the percentages of them that responded to the survey. Of the 115 participants that were selected for this study 80 or 70% responded to the survey.

Table 12

Total Number and Percentage of Survey Respondents Combined

Respondents	Number	Percentage
Administrators	6 of 6	100%
Master Teachers	5 of 6	83%
Mentor Teachers	8 of 12	67%
Career Teachers	61 of 91	67%
Total	80 of 115	69%

The Research Questions

Three research questions are posed regarding the implementation and impact of The System for Teacher and Student Achievement in three schools in DeSoto Parish that utilize the model.

Implementation Questions

1. To what extent are there differences between the three schools regarding the various components of The System for Teacher and Student Achievement?

2. To what extent are there differences between Master, Mentor and Career Teachers feeling with regards to implementation?

Impact Question

3. To what extent did The System for Teacher and Student Achievement affect Student Achievement?

Research Hypotheses

1. The study was directed by the following research hypotheses:
2. **Null Hypotheses 1**. There are no statistical differences between the three schools regarding the various components of the System for Teacher and Student Advancement.
3. **Null Hypotheses 2.** There are no statistical differences between Masters, Mentor and Career Teachers feelings with regards to the implementation process.
4. **Null Hypotheses 3.** There is no statistical significance regarding the effect of The System for Teacher and Student Achievement and Student Achievement.

Pre-Analysis of the Data

Cronbach's alpha is the coefficient of reliability that was be used to measure the internal reliability and consistency of the questionnaire. Validity and reliability are two fundamental elements in the evaluation of a measurement instrument. Instruments can be conventional knowledge, skill or attitude tests, clinical simulations or survey questionnaires. Instruments can measure concepts, psychomotor skills or affective values. Validity is concerned with the extent to which an instrument measures what it is intended to measure. Reliability is concerned with the ability of an instrument to measure consistency. The reliability of an instrument is closely associated with its validity. An instrument cannot be valid unless it is reliable. However, the reliability of an instrument does not depend on its validity. It is possible to objectively measure the reliability of an instrument by using Cronbach's alpha.

Regarding the interpretation of Cronbach's alpha, the closer the coefficient is to 1 the stronger the level of consistency and reliability.

Table 13

Cronbach's Alpha Reliability

	Cronbach's Alpha	N of Items
OAPD	.957	5
MCP	.888	4
COL	.926	9
IFA	.913	5
PBC	.943	9

The alpha for (OAPD) was .927. The alpha for (MCP) was .888. The alpha for (COL) was .926. The alpha for (IFA) was .913 (PBC). The alpha (PBC) was .943. The data suggests that the survey is reliable with the alphas being (.957), (.888), (.926), (.913) and (.943), all of which are very close to 1.

Question One

To what extent are there differences between the three schools regarding the various components of The System for Teacher and Student Achievement?

Ongoing Applied Professional Development (OAPD)

A one-way Analysis of Variance with post hoc testing was used to determine if there were any significant differences between the three schools in staff satisfaction with the ongoing professional development associated with TAP. The findings suggested that there were significant differences (F, 4.676, df 2, 80, p<.012). The mean score for the

early childhood school was 15.60 (STD, 5.481), elementary 17.906 (std. 4.67) and middle, 20.52 (std.7.17). Least Square Difference post hoc testing revealed that only the differences between the middle and elementary was statistically significant. The mean difference was 4.94 (p<=003). This suggests that while staff at the early childhood and middle schools did not differ in how they felt about ongoing professional development, staff at the elementary were less satisfied than those at the middle.

Table 14

Descriptive Analysis for OAPD

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.0	30	15.600	5.4810	1.0007	13.553	17.647	.0	25.0
2.0	32	17.906	4.6653	.8247	16.224	19.588	7.0	25.0
3.0	21	20.524	7.1737	1.5654	17.258	23.789	.0	25.0
Total	83	17.735	5.9224	.6501	16.442	19.028	.0	25.0

Table 15

ANOVA for OAPD

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	301.012	2	150.506	4.676	.012
Within Groups	2575.157	80	32.189		
Total	2876.169	82			

Table 16

Post Hoc for OAPD

(I) Campus	(J) Campus	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.0	2.0	-2.3063	1.4418	.114	-5.176	.563
	3.0	-4.9238*	1.6143	.003	-8.136	-1.711
2.0	1.0	2.3063	1.4418	.114	-.563	5.176
	3.0	-2.6176	1.5933	.104	-5.788	.553
3.0	1.0	4.9238*	1.6143	.003	1.711	8.136
	2.0	2.6176	1.5933	.104	-.553	5.788

Multiple Career Paths (MCP)

A one-way Analysis of Variance with post hoc testing was used to determine if there were any significant differences between the three schools in staff satisfaction with the Multiple Career Paths associated with TAP. The findings suggested that there were significant differences (F, 3.906, df 2, 79, p<.024). The mean score for the early childhood school was 10.53 (std. 4.591), elementary 13.344 (std. 4.632) and middle, 13.85 (std.5.091). A multiple comparison of the Post Hoc for MCP revealed that Campus (1) Pre-K was statistically significant with Campus (2) Elementary. The mean difference 2.814 (p<.022). Campus (1) Pre-K was also statistically significant with Campus (3) Middle School. The mean difference 3.316 (p=.017). This suggest that while staff at the Pre-K and Elementary schools did not differ in how they felt about MCP, staff at the Pre-K were less satisfied than those at the Elementary. This also suggests that while staff at the Pre-K and Middle schools did not differ in how they felt about MCP, staff at the Pre-K were less satisfied than staff at the Middle School.

Table 17

Descriptive Analysis for MCP

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.0	30	10.533	4.5918	.8384	8.819	12.248	4.0	19.0
2.0	32	13.344	4.6324	.8189	11.674	15.014	6.0	20.0
3.0	20	13.850	5.0915	1.1385	11.467	16.233	4.0	20.0
Total	82	12.439	4.8992	.5410	11.363	13.516	4.0	20.0

Table 18

ANOVA for MCP

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	174.960	2	87.480	3.906	.024
Within Groups	1769.235	79	22.395		
Total	1944.195	81			

Table 19

Post Hoc for MCP

(I) Campus	(J) Campus	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.0	2.0	-2.8104*	1.2027	.022	-5.204	-0.417
	3.0	-3.3167*	1.3661	.017	-6.036	-0.597
2.0	1.0	2.8104*	1.2027	.022	0.417	5.204
	3.0	-.5062	1.3489	.708	-3.191	2.179
3.0	1.0	3.3167*	1.3661	.017	0.597	6.036
	2.0	0.5062	1.3489	.708	-2.179	3.191

Collegiality (COL)

A one-way Analysis of Variance with post hoc testing was used to determine if there were any significant differences between the three schools in staff satisfaction with the Collegiality associated with TAP. The findings suggested that there were significant differences (*F*, 8.193, *df* 2,103, *p*<.000). The mean score for the early childhood school was 29.26 (std. 12.863), elementary 35.206 (std. 11.622), and middle, 20.289 (std.20.289). A multiple comparison of the Post Hoc for COL revealed that Campus (1) Pre-K was statistically significant with Campus (3), Middle School. The mean difference 3.724 (*p*<.018). Campus (2) Elementary was also statistically significant with Campus (3) Middle School. The mean difference 3.724 (*p*= .000). This suggest that while staff at Pre-K and Elementary schools did not differ in how they felt about COL, staff at Pre-K were less satisfied than those at the Elementary. This also suggest that while staff at the Pre-K and Middle Schools did not differ in how they felt about COL, staff at the Pre-K were less satisfied than those at the Middle.

Table 20

Descriptive Analysis for COL

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.0	34	29.265	12.8636	2.2061	24.776	33.753	.0	44.0
2.0	34	35.206	11.6223	1.9932	31.151	39.261	.0	45.0
3.0	38	20.289	20.6121	3.3437	13.514	27.065	.0	45.0
Total	106	27.953	16.8231	1.6340	24.713	31.193	.0	45.0

Table 21

ANOVA for COL

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4078.772	2	2039.386	8.193	.000
Within Groups	25637.992	103	248.913		
Total	29716.764	105			

Table 22

Post Hoc for COL

(I) Campus	(J) Campus	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.0	2.0	-5.9412	3.8265	.124	-13.530	1.648
	3.0	8.9752*	3.7244	.018	1.589	16.362
2.0	1.0	5.9412	3.8265	.124	-1.648	13.530
	3.0	14.9164*	3.7244	.000	7.530	22.303
3.0	1.0	-8.9752*	3.7244	.018	-16.362	-1.589
	2.0	-14.9164*	3.7244	.000	-22.303	-7.530

Instructionally Focused Accountability (IFA)

A one-way Analysis of Variance with post hoc testing was used to determine if there were any significant differences between the three schools in staff satisfaction with the Instructionally Focused Accountability associated with TAP. The findings suggested that there were significant differences (F, 6.867, df 2,102, p<.002). The mean score for the early childhood school was 14.67 (std. 6.613), for elementary 18.66 (std. 7.087), and for middle 10.92 (std.11.416). A multiple comparison of the Post Hoc for IFA revealed that Campus (2) Elementary was statistically significant with Campus (3) Middle School. The mean difference 2.090 (p=.000). This means that while staff at the Elementary and

Middle Schools did not differ in how they felt about IFA, staff at the Middle school was less satisfied than those at the Elementary.

Table 23

Descriptive Analysis for IFA

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.0	34	14.676	6.6137	1.1342	12.369	16.984	.0	24.0
2.0	33	18.667	7.0873	1.2337	16.154	21.180	.0	25.0
3.0	38	10.921	11.4169	1.8521	7.168	14.674	.0	25.0
Total	105	14.571	9.2683	.9045	12.778	16.365	.0	25.0

Table 24

ANOVA for IFA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1060.177	2	530.088	6.867	.002
Within Groups	7873.538	102	77.192		
Total	8933.714	104			

Table 25

Post Hoc for IFA

(I) Campus	(J) Campus	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.0	2.0	-3.9902	2.1470	.066	-8.249	.268
	3.0	3.7554	2.0741	.073	-.358	7.869
2.0	1.0	3.9902	2.1470	.066	-.268	8.249
	3.0	7.7456*	2.0906	.000	3.599	11.892
3.0	1.0	-3.7554	2.0741	.073	-7.869	.358
	2.0	-7.7456*	2.0906	.000	-11.892	-3.599

Question Two

To what extent are there differences between Master, Mentor and Career Teachers feeling with regards to implementation?

Krushal-Wallis is a rank based nonparametric test that can be used to determine if there are statistically significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable. As mentioned, this test is similar to a one-way between subject's ANOVA. The dependent variable, however, is based upon ranks or ordinal data. When there are three or more levels of independent variables, the Kruskal-Wallis is a more appropriate test. Thus, the levels in this study are Master Teacher, Mentor Teacher and Career Teacher.

Due to the small sample sizes for some of the job categories, Kurskal Wallis, was used to answer research questions two. It should be noted that due to the smaller sample size of Master Teachers that responded comparatively to Mentor and Career Teachers that the interpretation of these findings should be used with caution.

Ongoing Applied Professional Development (OAPD)

The null hypothesis, which states that there is no difference between how Master, Mentor, and Career Teachers evaluated the (OAPD) experience, was rejected (*p*.000). The means reported in Table indicate that the Master Teachers were more positive (Mean= 24.80), followed by the Mentor Teachers (Mean= 20.11) and lastly, the Career Teachers (Mean= 16.302). It should be pointed out, that although a non-parametric test was used, caution should be employed in interpreting these findings, given the small sample size for the master teachers.

Table 26

Hypothesis Test Summary

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The medians of Total - PD are the same across categories of Job Title.	Independent-Samples Median Test	.006	Reject the null hypothesis.
2	The distribution of Total - PD is the same across categories of Job Title.	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Multiple Career Paths (MCP)

There is no difference between how Master, Mentor, and Career Teachers evaluated (MCP) as indicated by the null hypotheses, which was rejected (*p*.019). The means reported in Table indicate that the Master teachers were more positive (Mean= 15.00), followed by the Mentor Teachers (Mean= 11.50), and lastly, the Career Teachers (Mean= 8.41).

Table 27

Descriptive Analysis for OAPD

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
2.0	5	24.800	.4472	.2000	24.245	25.355	24.0	25.0
3.0	9	20.111	8.0069	2.6690	13.956	26.266	.0	25.0
4.0	63	16.302	5.2537	.6619	14.978	17.625	.0	25.0
Total	77	17.299	5.8939	.6717	15.961	18.636	.0	25.0
	Fixed Effects		5.4833	.6249	16.054	18.544		
	Random Effects			3.2442	3.340	31.257		

Table 28

Hypothesis Test Summary for MCP

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Total - CP is the same across categories of Job Title.	Independent-Samples Kruskal-Wallis Test	.019	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Collegiality (COL)

Also, as indicated by the null hypotheses there is no difference between how Master, Mentor and Career Teachers evaluated the (COL) experience was rejected (p.018). The means reported in Table indicate that the Master teachers were more positive (Mean= 35.00), followed by the Mentor Teachers (Mean= 25.91) and lastly, the Career Teachers (Mean= 26.72).

Table 29

Descriptive Analysis for MCP

Total - CP									
					95% Confidence Interval for Mean				
		Nean	M Deviation	Std. d. Error	St ower Bound	L pper Bound	U inimum	N m	Maximu
0	2. 6	.000	15 6	7.536 0768	3. .091	7 .909	22 0	.	20.0
0	3. 2	1 .500	11 8	8.743 5241	2. .944	5 .056	17 0	.	20.0
0	4. 2	8 415	8. 8	6.091 727	.6 .076	7 753	9. 0	.	20.0
otal	T 00	1 180	9. 0	6.702 702	.6 .850	7 .510	10 0	.	20.0

Table 30

Hypothesis Test Summary for COL

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Total - COL is the same across categories of Job Title.	Independent-Samples Kruskal-Wallis Test	.018	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Table 31

Descriptive Analysis COL

Total - COL								
					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
2.0	6	35.500	18.0416	7.3655	16.566	54.434	.0	45.0
3.0	12	25.917	19.5423	5.6414	13.500	38.333	.0	45.0
4.0	82	26.720	16.5509	1.8277	23.083	30.356	.0	45.0
Total	100	27.150	16.9577	1.6958	23.785	30.515	.0	45.0

Instructionally-Focused Accountability (IFA)

There is no difference between how Master, Mentor and Career Teachers evaluated (IFA) as indicated by the null hypotheses being rejected (p.045). The means reported in Table indicate that the Master teachers were more positive (Mean= 20.33), followed by the Mentor Teachers (Mean= 14.66) and lastly, the Career Teachers (Mean= 13.46).

Table 32

Hypothesis Test Summary for IFA

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Total - INSACT is the same across categories of Job Title.	Independent-Samples Kruskal-Wallis Test	.045	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Table 33

Descriptive Analysis for IFA

Total - INSACT								
					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
2.0	6	20.333	9.9933	4.0798	9.846	30.821	.0	25.0
3.0	12	14.667	11.0728	3.1964	7.631	21.702	.0	25.0
4.0	82	13.463	8.8697	.9795	11.515	15.412	.0	25.0
Total	100	14.020	9.2605	.9261	12.183	15.857	.0	25.0

Performance Based Compensation (PBC)

The null hypotheses suggest that there is no difference between how Master, Mentor and Career Teachers evaluated the (PBC) experience as it was rejected (*p*.005). The means reported in Table indicate that the Master teachers were more positive (Mean=39.83), followed by the Mentor Teachers (Mean=32.83) and lastly, the Career Teachers (Mean=23.50). It should be noted that due to the small sample response size of the Master and Mentor Teachers that the interpretation of this non-parametric should be used with caution.

Table 34

Hypothesis Test Summary for PBC

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Total - PerfComp is the same across categories of Job Title.	Independent-Samples Kruskal-Wallis Test	.005	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Table 35

Descriptive Analysis for PBC

Total - PerfComp								
					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
1.0	6	39.833	6.8240	2.7859	32.672	46.995	29.0	45.0
2.0	6	32.833	17.0225	6.9494	14.969	50.697	.0	45.0
3.0	12	23.500	17.8707	5.1588	12.145	34.855	.0	43.0
4.0	82	22.061	14.4772	1.5987	18.880	25.242	.0	45.0
Total	106	23.840	15.2604	1.4822	20.901	26.779	.0	45.0

Question Three

To what extent did The System for Teacher and Student Achievement (TAP) affect the level of Student Achievement?

To determine the impact of (TAP) relative to Student Achievement, Standardized Test Scores (ILEAP/LEAP) were used in the areas of English Language Arts, Math Science and Social Studies for 3rd-8th grades comparing the 2009 school year test results, which was Pre-TAP to the 2014 school year test results, which was Post-TAP. DIBELS data were used to determine the impact of Student Achievement in grades K-2nd for the same corresponding years of Pre and Post TAP implementation. To determine if there was a significant effect on achievement regarding students in K-2nd Grade who took the DIBELS test Pre-TAP 2009 to Post-TAP 2014, an Independent *t*-test for the three different testing cycles—beginning, middle, and end—was done, comparing (a) the Mean Only and (b) 20th and 40th percentile only.

To determine if there was a significant effect on student achievement regarding students in grades 3rd-8th who took the LEAP/ILEAP test Pre-TAP 2009 to Post-TAP 2014 a Chi Square Test of Differences and Independent Sample T-test were used.

DIBELS (Mean Only)

The independent sample *t*-test was used to determine if there was a significant difference for the mean scores across the three testing periods for student achievement when comparing 2009 Pre-TAP DIBELS data to 2014 Post- TAP data for K-2nd grades. The findings suggested that there was a positive effect on student achievement. Since the Levene's test for the equality of variances was significant ($p < 0.001$) for all three-grade levels, the variances cannot be assumed equal. The mean for Grade 1 scores across of the three testing periods was significantly different (t (896.73) = -207.44, $p < 0.001$) with the pre-TAP mean was 46.05 (SD = 7.58) and the post-TAP mean was 167.69 (SD = 10.08), indicating that the post-TAP scores were higher. The mean for Grade 2 was significantly different (t(506.51) = -209.93, $p < 0.001$) with the pre-TAP mean was 50.69 (SD = 2.38) and the post-TAP mean was 250.35 (SD = 21.0). The mean for Kindergarten was significantly different (t (629.63) = -55.28, $p < 0.001$) where the pre-Tap mean was 23.42 (SD = 12.42) and the post-TAP mean was 125.28 (SD = 39.59).

Table 36

Mean Table for Grade Comparing 2009-2014

Group Statistics

Grade		Year	N	Mean	Std. Deviation	Std. Error Mean
1	Mean	2009	366	46.049	7.5832	0.3964
		2014	544	167.687	10.0784	0.4321
2	Mean	2009	461	50.689	2.3752	0.1106
		2014	494	250.349	20.9955	0.9446
K	Mean	2009	439	23.424	12.4171	0.5926
		2014	515	125.275	39.5918	1.7446

Levenes' Test for Equality of Variances

DIBELS (20th and 40th percentile only)

A t-test was used to determine what effect the 20th and 40th percentile had on student achievement when comparing 2009 Pre-TAP DIBELS data to 2014 Post- TAP data for K-2nd grades. The findings suggested that there was a positive effect on student achievement. Since the Levene's test for equality of variance was significant ($p < 0.001$) for all the 20th percentile and the 40th percentile for all three grade levels the variances cannot be assumed to be equal.

The 20th percentile for Grade 1 score across the three testing periods was significantly different (t (903.15) = -56.02, $p < 0.001$) with the Pre-TAP 20th percentile was 34.39 (SD =7.41), and the Post-TAP 20th percentile was 70.26 (SD =11.9). The 40th percentile for Grade 1 was significantly different (t (408.01) = 84.81, p, 0.001). The Pre-TAP 40th percentile was 43.38 (SD = 7.31) and the Post-TAP 40th percentile was 10.01 (SD =2.16), indicating that the Post-TAP was higher.

Table 37

Levenes' Test for Equality of Variances (Mean)

			Levene's Test for Equality of Variances		*t*-test for Equality of Means						
										95% Confidence Interval of the Difference	
Grade			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
1	Mean	Equal variances assumed	16.995	.000	-196.477	908	.000	-121.6376	.6191	-122.8526	-120.4226
		Equal variances not assumed			-207.440	896.727	.000	-121.6376	.5864	-122.7884	-120.4868
2	Mean	Equal variances assumed	1772.677	.000	-202.966	953	.000	-199.6603	.9837	-201.5908	-197.7298
		Equal variances not assumed			-209.929	506.513	.000	-199.6603	.9511	-201.5288	-197.7917
K	Mean	Equal variances assumed	1308.283	.000	-51.770	952	.000	-101.8504	1.9674	-105.7113	-97.9895
		Equal variances not assumed			-55.277	629.628	.000	-101.8504	1.8425	-105.4687	-98.2322

The 20th percentile for Grade 2 scores across the three testing periods was significantly different (t (606.8) = 38.9, $p < 0.001$). The Pre- TAP 20th percentile was 39.37 (SD =2.05) and the Post-TAP 20th percentile was 78.31 (SD = 6.18). The 40th percentile for Grade 2 was significantly different (t 929.106) =223.75, $p < 0.001$). The Pre-TAP 40th percentile was 46.4 (SD = 2.33) and the Post-TAP 40th percentile was 8.01 (SD = 2.94), indicating that the Post-TAP was higher.

The 20th percentile for kindergarten across the three testing periods was significantly different (t (707.84) = -73.57, $p < 0.002$). The Pre-TAP 20th percentile was 6.74 (SD = 8.759) and the Post-TAP 20th percentile was 80.32 (SD = 5.47). The 4th percentile for Kindergarten was significantly different (t (471.7333) = 14.15). The Pre-TAP was 18.55 (SD =18.55 (SD = 13.87) and the Post-TAP was 9.01 (SD = 2.947), indicating that the Post-TAP was higher.

Table 38

Percentile Table Comparing 2009-2014

Group Statistics

Grade		Year	N	Mean	Std. Deviation	Std. Error Mean
1	20th Percentile	2009	366	34.39	7.413	.387
		2014	544	70.26	11.893	.510
	40th Percentile	2009	366	43.38	7.316	.382
		2014	544	10.01	2.157	.092
2	*20th Percentile*	2009	461	39.37	2.049	.095
		2014	494	78.31	6.185	.278
	40th Percentile	2009	461	46.39	2.337	.109
		2014	494	8.01	2.947	.133
K	20th Percentile	2009	439	6.74	8.759	.418
		2014	515	80.32	5.437	.240
	40th Percentile	2009	439	18.55	13.875	.662
		2014	515	9.01	2.947	.130

Table 39

Levene's Test for Equality of Variances (Percentiles)

Independent Samples Test

Grade			Levene's Test for Equality of Variances		*t*-test for Equality of Means						
										95% Confidence Interval of the Difference	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
1	20th Percentile	Equal variances assumed	273.209	.000	-51.382	908	.000	-35.877	.698	-37.247	-34.506
		Equal variances not assumed			-56.022	903.157	.000	-35.877	.640	-37.134	-34.620
	40th Percentile	Equal variances assumed	1768.404	.000	100.136	908	.000	33.371	.333	32.717	34.025
		Equal variances not assumed			84.818	408.013	.000	33.371	.393	32.597	34.144
2	20th Percentile	Equal variances assumed	1249.280	.000	-128.728	953	.000	-38.939	.302	-39.532	-38.345
		Equal variances not assumed			-132.351	606.800	.000	-38.939	.294	-39.516	-38.361
	40th Percentile	Equal variances assumed	48.522	.000	221.987	953	.000	38.383	.173	38.043	38.722
		Equal variances not assumed			223.745	929.106	.000	38.383	.172	38.046	38.719
K	20th Percentile	Equal variances assumed	416.077	.000	-158.199	952	.000	-73.574	.465	-74.486	-72.661
		Equal variances not assumed			-152.696	707.843	.000	-73.574	.482	-74.520	-72.628

40th Percentile	Equal variances assumed	765.955	.000	15.220	952.000	9.548	.627	8.317	10.779
	Equal variances not assumed			14.149	471.733.000	9.548	.675	8.222	10.874

There were two tests performed to determine if there was a significant difference in student achievement measured by the LEAP/ILEAP test. Chi Square test of difference was used to determine if there was a significant difference in the distribution of proficiency level for each grade level on the LEAP/ILEAP tests between 2009-2014. A t-test was used to determine if there was a negative or positive effect on student achievement 2009-2014 across all grade levels (third to eight grade) for each of the proficiency levels for each of the subjects assessed by the LEAP/ILEAP test.

The Chi Square test of difference for Grades 3rd, 4th, 5th, 6th,7th, and 8th all have ($p < 0.001$) indicating that there was a significant difference in the distribution of proficiency level for each grade level comparing the results of the LEAP/ILEAP between 2009 and 2014.

A *t*-test was used to determine if there was a significant difference for the mean percentage for students scoring on proficiency levels between 2009 Pre-TAP and 2014 Post- TAP for students in Grades 3rd-8th. The levels of proficiency that are used to indicated increases or decrease in student achievement are from highest to lowest; Advanced, Mastery, Basic, Approaching Basic and Unsatisfactory. The findings suggested that there were increases in student achievement in most areas of proficiency when comparing Pre-TAP 2009 to Post –TAP 2014. Since the Levene's test for the equality of variances was significant ($p < 0.001$) for most of the levels of proficiency, the

variances cannot be assumed equal. The exceptions for levels not showing significant increases were ELA-Unsatisfactory (t (17.185) = .788, p >0.001), Social Studies–Approaching Basic (t (14.405) =.307, p > 0.001), and Social Studies–Unsatisfactory (t (12.638)=6.025, p > 0.001).

Table 40

Chi-Square Test Comparing 2009-2014 Chi-Square Tests

Grade		Value	df	Asymptotic Significance (2-sided)
3	Pearson Chi-Square	79.916[a]	19	.000
	Likelihood Ratio	84.447	19	.000
	N of Valid Cases	799		
4	Pearson Chi-Square	80.991[b]	19	.000
	Likelihood Ratio	89.032	19	.000
	N of Valid Cases	799		
5	Pearson Chi-Square	24.087[c]	19	.193
	Likelihood Ratio	24.772	19	.168
	N of Valid Cases	798		
6	Pearson Chi-Square	58.201[d]	19	.000
	Likelihood Ratio	60.893	19	.000
	N of Valid Cases	799		
7	Pearson Chi-Square	49.045[e]	19	.000
	Likelihood Ratio	50.670	19	.000
	N of Valid Cases	799		
8	Pearson Chi-Square	38.714[f]	19	.005
	Likelihood Ratio	39.771	19	.004
	N of Valid Cases	798		

Table 41

Levene's Test for Equality of Variances (Proficiency Levels)

Independent Samples Test

		Levene's Test for Equality of Variances		*t*-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	*t*	*df*	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
ELA-Adv	Equal variances assumed	7.895	.007	-7.542	65	.000	-6.20600	.82282	-7.84952	-4.56247
	Equal variances not assumed			-10.583	36.766	.000	-6.20600	.58640	-7.39441	-5.01758
ELA-Mas	Equal variances assumed	1.234	.271	-14.645	65	.000	-13.21966	.90267	-15.02268	-11.41665
	Equal variances not assumed			-16.810	23.734	.000	-13.21966	.78642	-14.84371	-11.59561
ELA-Bas	Equal variances assumed	3.471	.067	10.930	65	.000	13.39842	1.22589	10.94979	15.84705
	Equal variances not assumed			14.810	33.610	.000	13.39842	.90471	11.55905	15.23780
ELA-Abas	Equal variances assumed	3.043	.086	5.127	65	.000	4.95493	.96635	3.02470	6.88515
	Equal variances not assumed			4.592	17.168	.000	4.95493	1.07910	2.67992	7.22993
ELA-UnSat	Equal variances assumed	.672	.415	.879	65	.383	.78520	.89344	-.99940	2.56979
	Equal variances not assumed			.788	17.185	.442	.78520	.99664	-1.31580	2.88620
Math-Adv	Equal variances assumed	2.727	.104	-8.227	65	.000	-9.93945	1.20816	-12.35268	-7.52623

	Equal variances not assumed			-11.521	36.571	.000	-9.93945	.86276	-11.68826	-8.19065
Math-Mas	Equal variances assumed	.277	.600	-9.435	65	.000	-10.82955	1.14780	-13.12220	-8.53689
	Equal variances not assumed			-10.472	22.450	.000	-10.82955	1.03409	-12.97163	-8.68746
Math-Bas	Equal variances assumed	5.353	.024	5.250	65	.000	11.04358	2.10349	6.84201	15.24515
	Equal variances not assumed			6.446	26.918	.000	11.04358	1.71319	7.52791	14.55925
Math-Abas	Equal variances assumed	.081	.776	7.309	65	.000	6.59927	.90284	4.79591	8.40264
	Equal variances not assumed			5.355	14.702	.000	6.59927	1.23243	3.96776	9.23079
Math-UnSat	Equal variances assumed	5.634	.021	2.409	65	.019	3.69293	1.53290	.63107	6.75478
	Equal variances not assumed			3.107	29.902	.004	3.69293	1.18844	1.26548	6.12038
Sci-Adv	Equal variances assumed	.282	.597	-5.584	65	.000	-4.38598	.78542	-5.95480	-2.81716
	Equal variances not assumed			-5.575	19.335	.000	-4.38598	.78678	-6.03081	-2.74115
Sci-Mas	Equal variances assumed	1.775	.187	-5.868	65	.000	-9.93159	1.69247	-13.31218	-6.55099
	Equal variances not assumed			-7.107	26.197	.000	-9.93159	1.39739	-12.80290	-7.06027
Sci-Bas	Equal variances assumed	1.621	.208	2.060	65	.043	3.33732	1.61974	.10200	6.57264

	Equal variances not assumed			2.417	24.674	.023	3.33732	1.38052	.49219	6.18245
Sci-Abas	Equal variances assumed	25.913	.000	6.512	65	.000	8.41479	1.29221	5.83370	10.99588
	Equal variances not assumed			3.798	13.175	.002	8.41479	2.21534	3.63529	13.19429
Sci-UnSat	Equal variances assumed	372.539	.000	4.454	65	.000	2.81110	.63113	1.55045	4.07175
	Equal variances not assumed			2.524	13.039	.025	2.81110	1.11360	.40604	5.21616
SS-Adv	Equal variances assumed	44.961	.000	-2.110	65	.039	-2.51825	1.19367	-4.90253	-.13397
	Equal variances not assumed			-3.151	43.677	.003	-2.51825	.79911	-4.12910	-.90741
SS-Mas	Equal variances assumed	.004	.951	-3.261	65	.002	-6.70447	2.05575	-10.81068	-2.59826
	Equal variances not assumed			-3.364	20.169	.003	-6.70447	1.99290	-10.85935	-2.54959
SS-Bas	Equal variances assumed	16.336	.000	4.172	65	.000	8.00024	1.91751	4.17014	11.83034
	Equal variances not assumed			6.025	39.730	.000	8.00024	1.32789	5.31591	10.68457
SS-Abas	Equal variances assumed	15.880	.000	.523	65	.603	.58939	1.12714	-1.66200	2.84078
	Equal variances not assumed			.370	14.405	.717	.58939	1.59280	-2.81782	3.99660
SS-UnSat	Equal variances assumed	86.269	.000	1.963	65	.054	1.31565	.67028	-.02318	2.65449

Equal variances not assumed	1.008	12.638	.332	1.31565	1.30538	-1.51268	4.14399

The Table 37, at the bottom, indicates that there were significant increases in the percentages of student scoring at the levels of Advanced and Mastery, with the exception of 5th grade Science and Social Studies. The increases at students scoring at the Advanced and Mastery levels implies that there were decreases in the number of students scoring at Approaching Basic and Unsatisfactory levels. This table reflects data from the Department of Education's website for the students who took the LEAP/ILEAP test in Grades 3rd-5th at North DeSoto Elementary and Grades 6th-8th at North DeSoto Middle School for 2009 to 2014. It should be noted that even though the actual number of students increased from 2009-2014 the percent of students scoring at the higher levels of Advanced and Mastery which again implies a decrease in percentage of students scoring at the lower levels of Approaching Basic and Unsatisfactory.

Table 42

Comparative LEAP/ILEAP Data for 2009 to 2014 Grades 3rd-8th

Grade	Year	Test	Total Tested	Percentage ELA Advanced	Percentage ELA Mastery	Percentage Math Advanced	Percentage Math Mastery	Percentage Science Advanced	Percentage Science Mastery	Percentage Social Studies Advanced	Percentage Social Studies Mastery
3rd	2009	iLeap	137	1.3	15.4	3.8	16	1.3	17.6	0.7	15.7
3rd	2014	iLeap	168	10	37	18	26	10	31	3	37
Percent (+) /(-)				(+) 8.7	(+) 21.6	(+) 14.2	(+) 10	(+) 8.7	(+) 13.4	(+) 2.3	(+) 21.3
4th	2009	Leap	168	0.6	16.8	1.3	6.5	7.1	18.1	0.6	14.2
4th	2014	Leap	169	8	32	24	23	9	24	4	31
Percent (+)/(-)				(+) 7.94	(+) 15.2	(+) 22.9	(+) 16.5	(+) 1.9	(+) 5.9	(+) 3.4	(+) 16.8
5th	2009	iLeap	136	2.8	22.2	6.5	9.3	8.3	29.6	6.5	22.2
5th	2014	iLeap	163	8	28	10	22	6	32	5	17
Percent (+)/(-)				(+) 5.2	(+) 5.8	(+) 3.5	(+) 12.9	(-) 3.3	(+) 2.4	(-) 1.5	(-) 5.2
6th	2009	iLeap	130	0.6	14.5	5.7	13.2	2.5	20.8	6.9	17.0
6th	2014	iLeap	168	7	31	17	25	7	25	12	23
Percent (+)/(-)				(+) 6.4	(+) 16.5	(+) 11.3	(+) 11.8	(+) 4.5	(+) 4.2)	(+) 5.9	(+) 6
7th	2009	iLeap	154	5.1	18.1	9.4	15.2	2.9	21.0	5.1	30.4
7th	2014	iLeap	168	14	29	16	25	11	40	12	34
Percent (+)/(-)				(+) 8.9	(+) 10.9	(+) 6.6	(+) 9.8	(+) 8.1	(+) 19	(+) 6.9	(+) 3.6
8th	2009	Leap	144	3.1	16.4	8.6	9.4	2.3	19.5	3.1	17.2
8th	2014	Leap	174	6	31	22	13	4	33	2	30
Percent (+)/(-)				(+) 2.9	(+) 14.6	(+) 13.4	(+) 3.6	(+)1.7	(+) 13.5	(-) 1.1	(+) 12.8

CHAPTER V

Conclusions and Recommendations

Introduction

The purpose of this study was to investigate whether or not the implementation of The System for Teacher and Student Achievement (TAP) in three schools in Louisiana that are funded by the Teacher Incentive Fund had an impact on teacher effectiveness and student achievement. The three schools in this study were located in the DeSoto Parish School District and include schools that have implemented The System for Teacher and Student Achievement (TAP) Three Years and Beyond. To determine the implementation of teacher effectiveness this study examined a version of the (TAP) Attitude Survey which is required by the National Institute for Excellence in Teaching. To determine the impact of (TAP) relative to Student Achievement, Standardized Test Scores (ILEAP/LEAP) were used in the areas of English Language Arts and Math for 3rd-8th grades comparing the 2009 school year test results, which was Pre-TAP to the 2014 school year test results, which was Post-TAP. DIBELS data was used to determine the impact of Student Achievement in grades K-2nd for the same corresponding years of Pre and Post TAP implementation.

Policy makers have expressed concerns about the lack of rigorous, independent research on the effectiveness of The System for Teacher and Student Achievement (TAP) or any other approach to teacher compensation reform and professional development (Hassell, 2002). Given the pace of policy proposals and investment in this area, the

research needed to guide these investments is lagging. To date the research literature consists of no experimental studies and very few quasi-experimental studies-including (TAP) studies by Schacter et al. (2002, 2004).

Broadly, this study was significant in that it contributes to the current body of knowledge regarding teacher effectiveness relative to improved student achievement. The results are particularly useful to policy makers, district administrators and principals who are investigating the effects and benefits of programs such as TAP that are designed to improve teacher quality. The study also helps guide principals that are currently implementing TAP to ascertain what factors may impede or facilitate the success of the TAP process

Summary Findings

This study demonstrated that three questions posed in the case study were significant to its findings. The two areas that were examined during this study were program implementation and the impact of the program on student achievement and while there are multiple variables that are factored into the measurement of the implementation process and student achievement this study narrowed the focus to how this particular program (TAP) was implemented and its impact on student achievement. The summary findings from this study suggest that while there were differences between the three schools regarding the various component of the TAP process and that participants at the PreK-2nd school were less satisfied than participants at the Elementary and Middle schools and that there were no significant differences at the various schools regarding its implementation.

Research Question 1

To what extent are their differences between the three schools regarding the various components of The System for Teacher and Student Achievement?

The findings from this case study suggest that there were significant differences between the three schools regarding the various components of The System for Teacher and Student Achievement. Participants at the Pre-K School were less satisfied with OAPD, MCP, and COL that participants at the Elementary and Middle Schools and participants at the Middle School were less satisfied with (IFA) than participants at the Pre-K and Elementary Schools.

Research Question 2

To what extent are there differences between Master, Mentor and Career Teachers feeling with regards to implementation?

The findings in this case study suggest that there were no significant differences in how Master, Mentor, and Career Teachers felt regarding the implementation of the TAP process relative to OAPD, MCP, COL, IFA, and PBC Concomitant. They suggest that, in every case, the responses from Master Teachers were more positive regarding how they felt about the implementation of TAP.

Research Question 3

To what extent did The System for Teacher and Student Achievement (TAP) affect the level of Student Achievement?

The findings in this case study suggest that there was a positive effect on student achievement relative to DIBELS comparing scores 2009 Pre-TAP to 2014 Post-TAP for students in Kindergarten -2nd Grade. There was a positive effect on student achievement

for the students in grades 3rd-8th that took the LEAP/ILEAP test ELA, Math, Science and Social Studies at the levels of Advanced, Mastery and Basic. There appeared to be only a marginal effect on students who took the test and scored at the levels of Approaching Basic and Unsatisfactory.

Recommendations for Practice

Professional development for teachers is a key mechanism to improving classroom instruction and student achievement (Ball & Cohen, 1999). Specifically, differential teacher effectiveness is a strong determinant of differences in student learning, far outweighing the effects of differences in class size and class heterogeneity (Darling-Hammond, 2000). Development programs that fail to address these needs are unlikely to succeed (Guskey, 1995). The content of the professional development is most useful when it focuses on "concrete tasks of teaching, assessments, observation and reflection" (Darling-Hammond & McLahghlin, 1999, p. 598) rather than an abstract discussion of teaching. Studies find strong effects of professional development on practices when it focuses on enhancing teachers' knowledge of how to engage in specific pedagogical skills and how to teach specific kinds of content to learners. Equally important is a focus on student learning, including analysis of the conceptual understanding and skills that students are expected to demonstrate (Carpenter et al., 1989).

Based on the findings from this study, I recommend that the practice and implementation of the TAP model be continued at the three schools in DeSoto Parish.

Recommendations for Policy

Policy makers increasingly recognize that schools can be no better than the teachers and administrators who work in them. While these proposed professional development programs vary widely in their content and format, most share a common purpose: to 'alter the professional practices, beliefs and understanding of school personnel toward an articulated end' (Griffin, 1983, p. 2). In view of what Hammond and McLaughlin reported (1995), professional development for teachers is a key mechanism to improving classroom instruction and student achievement. Teachers have a more significant influence on student achievement than any other school factor and they vary widely in their impact (Kane, Rockoff, & Staiger, 2006; Nye, Knostantoplous, & Hedges, 2004).

Policy makers have expressed concerns about the lack of rigorous, independent research on the effectiveness of The System for Teacher and Student Achievement (TAP) or any other approach to teacher compensation reform and professional development (Hassell, 2002). To that end, the findings from this study suggest some key components that promote effective job embedded professional development. The survey taken by the respondents was designed to gain insight and information about the implementation of the TAP process in five specific areas: Ongoing Applied Professional Development (OAPD), Multiple Career Paths (MCP), Collegiality (COL), Instructionally-Focused Accountability (IFA), and Performance-Based Compensation (PBC). Mentor Teacher's responses suggested that OAPD, COL, IFA, and PBC were all significant relative to implementation, but not MCP. Career teacher's responses suggested that OAPD, MCP, COL, IFA and PBC were all significant relative to the implementation process.

Based on the findings from this study I recommend that educational policy reflect the need for more programs that support job embedded professional development program and processes like the TAP process with the allocation of funds necessary to enact such polices.

Recommendations for Future Research

Principals and District personnel are always looking for programs and processes that can be implemented systemically that increase teacher effectiveness and overall student achievement. Budgetary constraints are often factors as well in the decision making process. This study also suggests that the System for Teacher and Student Achievement is a viable program in that it had a positive effect on teacher effectiveness and student achievement.

Although this study examined overall teacher effectiveness through the lenses of the implementation and impact of The System for Teacher and Student Achievement, it cannot provide all of the answers to the never-ending quest to improve the teaching and learning process. In order to enhance and enrich the literature it is imperative that future studies be expanded include more independent research on (TAP) and programs similar to it. Such recommendations are listed below:

1. A longitudinal study should be conducted concerning the overall impact of (TAP) in other states with schools that have implemented the program Three Years and Beyond.
2. Specific research should be done to determine whether (TAP) is effective at all levels including High School.

3. There needs to be more federal funds allocated for more Independent Research regarding (TAP).
4. Design a study to examine whether there is a correlation between Urban, Suburban and Rural schools regarding the implementation of TAP.
5. Design a study to examine schools in a district that implement TAP versus those that do not comparing teacher effectiveness and student achievement.
6. Additional inquiry is needed to explore additional factors that affect the implementation of effective job embedded professional development.
7. A comprehensive study can be performed to evaluate the motivation for teachers versus administrators with regards to professional development.
8. A replication research study can be performed within the district to validate to disprove some of the conclusions of this study.

Conclusion

While the primary focus of this study was The System for Teacher and Student Achievement, it is important to note that the issue of teacher effectiveness should be examined through various lenses. In the context of accountability and The No Child Left Behind Act, policy makers allocated millions of dollars every year to programs and processes that are supposed to increase student achievement and teacher effectiveness. This issue can only be effectively addressed when all stakeholders; parents, universities, states, politicians and local school districts are aligned with a single purpose to improve the quality of teaching. As educators we often profess to have a progressive philosophy but most often in our actual practices it is quite essentialist in nature. Our affirmation should be the actualization that the single most important factor regarding increase

student is the quality of the teacher in the classroom and to that end we should strive to enhance and enrich this journey called education.

References

Algiers Charter Schools Association. (2009). Education…just different a new direction for success. Retrieved from www.algierscharterschools.org.

Archibald, S., Coggshall, J.G., Croft, A, & Goe, L. (2011). High quality professional development for all teachers: Effectively allocating resources. Research Policy Brief. Washington D.C.: National Comprehensive Center for Teacher Quality.

Bill and Melinda Gates Foundation. (2012). MET project: Feedback from better teaching; Nine principles for using measures of effective teaching. MET Project, Learning about Teaching.

Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Research*, *33*, 8, 3-15.

Case Study of Manor New Tech High School: Promising Practices for comprehensive High Schools prepared by E3 Alliance, October 15, 21009, Prepared for the National Science foundation Engineering Education Division Grant Award EEC-0835961.

Chait, R. (2009). Ensuring effective teachers for all students. Retrieved from www.edweek.org/media/eperc_qualityteaching_12.11.pd.

Chung Wei, R. Darling-Hamond, Alethea, A., Richardson, N., & Stelos Orphanos. (2009). Professional learning in the learning profession: A status report on teacher development in the U.S. and Abroad. Technical Report. Oxford, OH: NSDC National Staff Development Council.

Darling-Hammond, L. (1997). *Doing what matters most: Investing in quality teaching*. New York, New York: The National Commission on Teaching and America's Future.

Darling-Hammond, L., & Rothman, R. (2011). Teacher and leader effectiveness in high performing education systems. Alliance for Excellence in Education and SCOPE. Palo Alto, CA: Stanford Center for Opportunity Policy in Education.

Department of Education Office of the Under Secretary Policy and Program Student Services. (2010). Policy and program brief: Improving teacher quality in U.S. School Districts.

Dunlap, A, Guan, C., Johnson, L., & Poppino, R. (2011). Should the Mountain View Whisman School District adopt a pay for performance? An Evaluation of Potential Effects and Implementation Issues.

Eckert, J. (2009). More than widgets: TAP; A systematic approach to increased teaching effectiveness.

ESEA. (2013). Findings from the 2011-12 survey on the use of funds under Title II, Part A.

Guskey, T.R. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice, Vol. 8, pages* ¾.

Henenan, H.G., & Young, I.P. (1991). Assessment of a merit pay program for school district administrators.

Jerald, C.D., & Van Hook, K. (2011). *More than measurement: The TAP system's lessons learned for designing better teacher evaluation systems*. Santa Monica, California: The Joyce Foundation (NIET).

Jensen, J., Yamashiro, G., & Tibbets, K.A. (2010). What do we know about teacher pay for performance? Honolulu, HI: Kamehameha Schools Research and Evaluation Division.

Mathematica. (2013). Evaluating the Chicago Teacher Advancement Program. Retrieved from http://www.mathematica-mpr.com/education/tapchicago.aso.

Mead, S. (2012). Recent state actions on teacher effectiveness: What's in state laws and regulations? Bellwether Educational Partners. August 2012.

Miles, K.H., Odden, A., Fermanich, M., Archibald, S., & Gallagar, A. (2003). Professional development: Lessons from *Comparing Five Urban Districts*, Urbana-Champagne, Ill: Consortium for Policy Research in Education.

National Center on Performance Incentives. (2010). Examining performance incentives in education. Vanderbilt University, Peabody College. Retrieved from www.performanceincentives.org.

National Center for Performance Incentives (2008). Impact of the Teacher Advancement Program on student test score gains: Findings from an independent appraisal.

New Schools Venture Fund. (2007). D.C. implementation of the Teacher Advancement Program (TAP).

Odden, A.R., & Kelly J. (2008). A new series of papers on teacher compensation. Madison, WI: University of Wisconsin CPRE Group.

Preis, S. (2010). Teacher effectiveness and teacher compensation. St. Louis, Missouri: The Joint Commission on Education.

Sawchuk, S. (2011). Arizona state undergraduates must prove classroom mastery. *Education Week, Vol. 31 page*(12).

Schacter, J., Thum, Y.M., Reihsheider, D., & Schiff, T. 2007). The Teacher Advancement Program Report Two: Year Three Results from Arizona and Year One Results from South Carolina.

Solomon, L.C., White, J.T., Cohen, D., & Woo, D. (2007). The effectiveness of the teacher advancement program. Santa Monica, California: National Institute for Excellence in Teaching.

South Carolina Department of Education. (2009) South Carolina State Department of Education and TAP schools (SCTAP) 2009-2010 http://ed.sc.gov/agency/se/school-transformation/tap/

Springer, M. (2008). The impact of the teacher advancement program on student score gains: Findings from an Independent Appraisal. Program on Educational policy and Governance Working Paper Series, Vanderbilt University.

The TAP Foundation. (2009). Understanding the Teacher Advancement Program. Retrieved from www.tapschools.org.

The Working Group on Teacher Quality. (2007). Roundtable discussion on value added analysis of student achievement: A summary of findings, October 26, 2007.

Weisberg, D., Sexton, S., Mulhern, J., & Keeling, D. (2009 The widget effect: Our national failure to acknowledge and act on differences in teacher effectiveness.