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Professional Development For K--12 Charter School Teachers in Jersey City: Effects on Student Achievement

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Walden University
2011

Professional Development For K-12 Charter School Teachers in Jersey City: Effects on

Student Achievement

by

Davidson N. Okere

Doctoral Study Presented in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

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April, 2011.

ABSTRACT

Continuous workforce training programs are important for business productivity. Traditional professional development practices (those that make teachers passive consumers of knowledge) may no longer satisfy the need for teachers' professional growth and for student achievement as measured by test scores. The purpose of this quantitative, nonexperimental study was to consider the importance of professional development and *collegiality* (teacher collaboration) on student achievement. This study was based on Piaget's constructivism. The research question asked whether teachers thought collegial professional development and management's support helped teachers improve student achievement based upon the type of professional development (PD) employed at their schools. The Standards Assessment Inventory (SAI) was used to gather data from a convenience sample of 68 charter school teachers in metropolitan New Jersey. A *t* test used to analyze SAI differences across groups that either received generic PD delivered by an external service or those who received PD that was internally designed to the specific needs of their schools. Results were used to document that charter school teachers reported frequent use of all 11 SAI criteria at their schools, and the internally designed PD group reported significantly more types, diversity and research-based PD than those receiving generic programs. The recommendation is that administrators allow teachers to practice peer coaching and observe colleagues who implement effective teaching strategies in their classrooms rather than endorsing specific professional development methods. Implications for social change include improving student achievement through the collaborative practice of teachers, and assisting students to realize their full potential.

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DEDICATON

This dissertation is dedicated to my wife Beatrice, my son, Kelechi, and the entire members of my family who, by their support and encouragement, this milestone was made in my life.

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SECTION 1

INTRODUCTION

A company remains competitive by continuous training of its workforce. The same is true with the school system. Michigan Curriculum Framework (2003) affirmed, "If educators are to intellectually engage their students in-depth of understanding and breadth of content coverage they too must be intellectually engaged" (p. 3). Similarly, the National Education Association Foundation (1996) asserted that teachers have to engage in continuous learning to be able to help students achieve high standards of learning. If teachers are to cope with the current challenges posed to them in the profession, it follows they have to be versed both in their teaching methods and in their content knowledge.

The release of *A Nation at Risk* in 1983, a report published by the United States Department of Education's National Commission on Excellence in Education, ushered in a series of reforms in the public school system (A nation at Risk, 1983). From the 1990s to the present, many organizations including the National Commission on Teaching and American Future believe that adequate teachers' knowledge and skills have an effect on high student achievement. The belief in teachers' knowledge led to the standards-based reform movement and the need for effective *professional development,* that is in-service training which equip teachers with the skills they need for their job. The standards are not without stringent accountability measures. All stakeholders in the public school system are affected by the standards-based reform. Kronley and Handley (2001) argued that

despite enormous resources put into professional development, there is increasing concern about what makes it effective. Again, the knowledge about how content affects its delivery and success is fragmented.

Another cause of fragmentation is the focus on isolated skills and strategies that can improve teachers' classroom practice (Hixon & Tinzmann, 1990). The researchers referred to this kind of fragmentation as a *reductionist approach to education*, which is viewing teaching and learning as a collection of unconnected distinct parts that will eventually be put together as a whole. As reported by Peredo (2004) professional development was effective when the program is designed to be self-directed, contains experiential activities, is problem-centered, and involves occupational tasks of participants. Darling-Hammond and McLaughlin (1995) maintained that the learning styles of teachers involve learning by doing, reading, reflecting, and collaborative work. The researchers stressed that when teachers combine many learning processes during their professional development it helps them transfer theory to practice in their classrooms.

The importance of professional development is to equip teachers adequately in their important job of changing the society through their students (Lieberman & Wood, 2001). Although professional development has assumed many names over the years, its content has not changed. Lieberman and Wood argued that many *traditional professional development sessions* that is, professional development sessions which subject teachers to the role of passive consumers of the knowledge of an expert as opposed to professional development which engages teachers in collaborative work. These researchers maintained

that, although professional development is very important, traditional professional development does not offer follow-up opportunities to determine if it is producing the desired effect in the classroom, namely improvement in students' test scores.

Often there is no needs assessment for professional development by the school district (Lieberman & Wood, 2001). The experts in professional development hired have no knowledge about the school culture, goals, and vision; neither do they understand the teachers. The professional development experts give professional development with the assumption that one size fits all; this type of traditional professional development does not achieve what it is purported to accomplish. A detailed discussion of collaborative professional development will be found in section 2.

As schools continue to become rapidly diversified with students from different ethnic backgrounds, the need increases to engage the school team in adequately planned continuous professional development. Howard (2007) pointed out that many school leaders are equipping their teachers with the required skills to meet the needs of all their students. Howard affirmed the skills embedded in the transformative process for serving a heterogeneous student body encompasses five phases: (a) building trust, (b) engaging personal culture, (c) confronting issues of social dominance and social justice, (d) transforming instructional practices, and (e) engaging the entire school community (p. 17).

Students from groups that are poorly served are mindful of the kind of treatment given to them by their teachers, and reciprocate accordingly (Howard, 2007). For example, when students understand that a teacher cares for their well being, they respond

positively, trying to please the teacher by working harder academically. Howard advised educators to develop teaching skills that address the individual needs of students from different backgrounds.

Bemak and Chung (2007) argued that school improvement needs the concerted effort of the school team. Given the fact that school counselors assume a prominent position in the effective functioning of a school, they can contribute to equity and service for the general population of the school (Bemak & Chung). Counselors can act as advocates for the marginalized student. Bemak and Chung added that counselors can function effectively as advocates if they are given three levels of preparation such as pre-service training, in-service professional development and supervision with special emphasis on social equity and advocacy. El- Haj (2003) described Teachers' Learning Cooperative (TLC) as an urban teacher network that is committed to use observation and oral description of the particular to improve schools. El-Haj pointed out that the official reform policies carried out by school districts, state, or federal legislation adopt general measures for equal treatment, whereas TLC asserted that change comes from specific treatment that protect the interest of every child in every school and classroom. Specific treatment pays attention to all implications involved in teaching and learning. El-Haj further noted that TLCs treat classrooms as venues where knowledge is constructed cooperatively and adds that the TLC has created an understanding that equitable treatment involves good knowledge of the child and the obligation to educate the child successfully.

Abdal-Haqq (2000) observed that children, who are poverty-stricken or have different racial, ethnic or linguistic grouping, historically have been the victims of systemic inequity. El-Haj concluded that any attempt for school improvement that does not address the causes of under achievement of the marginalized students or the role the school plays to ensure equitable treatment will not yield success. Therefore, for change to take place schools need to work cooperatively with the parents, students, and the community.

Problem Statement

School reform has been the norm in the educational system of the United States of America since the past 200 years (Stolp, 1994). There have been constant changes in policies and procedures of the school system. For example, since 1894 it has been mandatory for teachers to prepare lesson plans, indicate objectives and set goals (Stolp, 1994). However, these changes have not much affected the basic structure of education, but have determined the direction of education in America. In contrast, the driving force for school reform today is to enable American students to fit into the competitive world economy (Stolp, 1994; No Child Left Behind, 2004), and to give every student a fair chance to succeed.

Educators in the United States are alarmed by reports from universities that applicants lack the basic skills needed for advanced studies (Stolp, 1994). Consequently, something must be done to prepare the future workforce adequately. Stolp maintained that it is not enough for the students only to possess academic excellence; they must be

able to solve problems as they occur, make decisions, and be able to survive as democratic citizens in today's economy.

In order to make the education of our students reach the standards needed, Congress passed the Educate America Act in 2000. That act was meant to reform schools by establishing high academic and occupational standards (Stolp, 1994). Invariably, the Educate America Act in 2000 set into law the National Education Goals that handle school readiness and completion, student academic achievement, leadership in mathematics and science, adult literacy, and safe and drug free schools (Stolp, 1994). In addition to these student-related goals, parent participation and professional development were included. The most recent act is the No Child Left Behind Act of 2001(NCLB). public law 107-110 (U.S. Department of Education, 2007). Stolp (1994) averred that as a federal law that initiated programs to improve the academic achievement of students, the NCLB set higher standards of accountability for states, school districts, and schools. Outcome-based education was the norm of standards in the past (Walker, 2002). Today both outcome and standards recognize that learning means more than rote knowledge of what is learned, but also involves making sense of new knowledge. Walker stressed that when standards are not properly applied, they hinder the capability of both the instructor and the student to engage in meaningful learning.

According to Neville and Robinson (2003) many researchers, policy makers, and educators view professional development as a positive tool for improving student achievement and an important approach for increasing teachers' content knowledge and teaching. The research problem being addressed is that some teachers complain that the

district and the principals make them participate in professional development sessions that do not relate to what they teach. Though some professional development activities can be of great importance, others provide knowledge that is not useful to actual classroom practice. Neville and Robinson (2003) maintained that, although some states, districts, and universities agree that changes in professional development can produce the required results in school improvement and student achievement, these stakeholders cannot do much because they are limited by financial constraints. In effect, universities continue to prepare teachers in the traditional way, while districts and states continue to provide professional development that is not capable of building instructional capacity. Still, Neville and Robinson (2003) argued that other researchers, policy makers, and educators regard the quality of professional development around the nation to be worthless.

Hargreaves (2003) posited that teachers can no longer work and learn in isolation in this fast changing society. Teachers need to become experts in their profession by means of constant collective inquiry and problem solving in collegial teams. Hargreaves continued to argue that time has passed when teachers can assume that once qualified as a teacher, one who knows the basic principles of teaching can continue to improve by trial and error in the classroom. The Southern Regional Education Board (1998) maintained that traditional professional development does not make provision for observation, practice or feedback. Again, some researchers argue that what is learned in professional development sessions is not implemented in the classroom.

This quantitative nonexperimental study used the survey method to find out if 100 teachers who work in Jersey City, New Jersey, thought that collegial professional development was more likely to improve schools than the traditional professional development method.

Nature of Study

The inquiry method for this study was a quantitative nonexperimental study. The quantitative nonexperimental method was used because:

1. Data collection using some quantitative methods is relatively quick (e.g., telephone interview).

2. It provides precise, quantitative, numerical data.

3. Data analysis is relatively less time consuming (using statistical software).

4. The research results are relatively independent of the researcher (e.g., statistical significance).

5. It may have higher credibility with many people in authority (e.g., administrators, politicians, people who fund programs).

6. It is useful for studying large numbers of subjects.

The survey research method was used. The survey questions were ranked on a 5-point Likert-type scale: 0 representing never, 1 seldom, 2 sometimes, 3 frequently, and 4 always. The sample was 100 teachers who work at four schools in Jersey City, New Jersey.

Quantitative data were collected to determine the effects of five key factors of professional development in improvement of teaching practice, namely:

1. Collegiality (peer coaching, study groups, or teacher networks).

2. Research-based practice.

3. Development of content knowledge and effective teaching.

4. Differentiation of instruction to meet the needs of diverse learners.

5. Practical application of what was learned in professional development sessions in the classroom.

Teachers were informed that the survey was purely for academic work and was anonymous. They were requested to respond to the survey questions as they applied to their schools. Statistical and quantitative analysis were used. More details of the quantitative analysis were reported in section 3.

Research Questions and Hypotheses

The following research questions guide the inquiry of this study:

1. Considering the fact that teachers are the central focus of the recent Education Reform Acts, in the opinion of the teachers surveyed, does professional development help teachers improve schools?

2. In the opinion of the teachers surveyed, does support from management encourage collegial activities?

3. In the opinion of the teachers surveyed, does collegiality help to improve schools?

4. In the opinion of teachers surveyed, do teachers apply what is learned in the traditional professional development method in their classrooms?

Research Objectives

Guided by the following objectives, the information found by this study will enable the educators of Jersey City Schools to:

1. Make a contribution to the field of education by having teachers work in collegial groups to improve schools.

2. Allow teachers to direct their own professional development and no longer depend on the knowledge of an external expert.

3. Change the nature of a traditional classroom to a sociable, interactive environment that supports active learning.

4. Support new teachers through good induction and peer coaching.

5. Equip new teachers in their content knowledge and better pedagogies, so that they would want to stay and develop their professional skills.

6. Support and retain existing teachers in an attempt to stop continuous recruitment of new teachers.

7. Help teachers to facilitate rather than direct learning.

8. Help teachers to use the inside experts at their schools in their professional development.

Purpose of Study

The purpose of this study was to find out if collegial professional development facilitates the academic improvement of schools in the Jersey City Schools more than the traditional professional development method. Traditional professional development was criticized for not enhancing actual classroom changes (Lieberman & Wood, 2001; South Regional Education Board, 1998). This study sought to answer the question: if teachers can take charge of their own professional development, practice in their classrooms with their peers, and develop cordial and trusting relationships with students, can they, through these factors improve the school? Moreover, when teachers work collaboratively, can they cope better with the challenges that the present day teaching profession poses? This study aimed to help teachers focus on student achievement in their respective classrooms. It may help all schools make a positive change in student achievement, particularly in Jersey City, New Jersey where the study took place.

Significance of the Study

The study was significant for the teachers and the students of Jersey City, New Jersey. Teachers will grow in their content knowledge and will apply what they learned in professional development sessions to actual classroom settings. The collegial activities will involve teachers in continuous learning, trials and feedback on new techniques in important areas of concern to them, rather than on what has been mapped out for them by the administration (Kronley & Handley, (2001).

Theoretical Base of the Study

This quantitative nonexperimental study was based on constructivism developed by Dewey in 1925. Walker (2002) defined *constructivism* as a learning theory in which learners construct meaning based on previous knowledge, beliefs, and experiences. Hein (1991) added that learners construct knowledge for themselves when they are involved in active learning activities. Collegial interactions enable teachers to construct knowledge during professional development. In addition to building trust, common goals and vision, teachers in these interactions do not depend on the knowledge of an expert. As teachers form the habit of collective inquiry in their activities, they are confident in what they are doing in the classroom. Lieberman and Woods (2001) maintained that when teachers become happy with their job they are willing to go to a greater length in the improvement of student achievement.

Operational Definition of Terms

Collaborative apprentice model: A method of professional development that uses four different professional learning phases to model various professional learning activities (Glazer & Hannafin, 2006). Individual teachers grow professionally through a series of collaborative learning projects.

Collegiality: Consensus and mutual respect among a group of teachers who have agreed to work together for a common purpose in the improvement of the school (Marzano, 2003). It is the manner in which teachers interact with one another.

Community of learners: A place where all participants (teachers, principals, parents and students) engage in learning and teaching (Barth, 1990).

No Child Left Behind Act (NCLB): A law that provides guidance in delegating to the states the responsibility of setting content and student performance standards (Linn, 2003). The main purpose of the law is to improve the academic achievement of students.

Technical coaching: A coaching method that is mainly based on adding new skills to what is already known (Hargreaves & Dawe, 1990). Peers master a new skill through observation and non-evaluative interaction.

Assumptions of the Study

The study assumed that professional development delivered by a hired expert is not reflected in classroom practice because the professional development sessions do not address the need of the teachers (Lieberman & Woods, 2001; South Regional Education Board, 1998). In contrast, when teachers are responsible for their own professional development, they practice what they have learned with their students and are able to understand how different students learn. Again, Lieberman and Woods (2001) asserted that when a school initiates a school-wide collaborative and collegial culture such as peer coaching, study groups, and teacher networking, teachers develop an intimate and cordial relationship, which results in school effectiveness.

The National Center for Education Standards (1996) maintained that teachers need an opportunity to study, engage in research, and share their findings with their peers. The study assumed that when teachers engage in collegial relationships, they

construct knowledge. When veteran teachers help the novices, drudgery and isolation that are typical of a traditional classroom are dispelled, thus making it possible for the teachers to transform the students to high-achieving learners.

Limitations of the Study

1. The findings cannot be generalized because only four charter schools were surveyed. Since each school district was autonomous, what was obtained in one school district may not be the same in another school district.

2. The survey was not electronically administered; it was possible that respondents may have compared their responses, thus affecting the actual result of the survey.

3. This study was confined to surveying 100 teachers in Jersey City Schools. Data collection was limited to the effect of five key factors of professional development such as collegiality, research based practice, development of content knowledge, practical application of skills learned in the classroom, effective teaching, and differentiation of instruction to meet the needs of diverse learners, as perceived in the opinion of those teachers.

4. The study used an open-ended question to find out the teachers' opinion about which professional development method they took that helped to improve the scores of their students: the traditional lecture method by a hired expert or the school-planned professional development which made them work collegially. Of the 100 respondents 32 of them did not respond to the open-ended question. The low response affected the overall result of the study.

Scope and Delimitations of the Study

1. The *t* test did not agree with the assumption that collegial professional development was more likely to improve schools than the traditional professional development.

2. Again, teachers would have responded more to a true or false question than they did to the given open-ended question.

3. It was not possible to survey both the charter schools and the other schools in Jersey City School District because I was not granted permission by the school board in Jersey City.

Summary and Transition

The study comprises five sections. Section 1 pointed out that the need for school improvement has given rise to the standard-based reform movement and the need for effective professional development. Teachers' content knowledge is important in students' achievement, although content knowledge does not mean effective delivery. The traditional professional development approach can no longer serve the needs of the present day schools. Teachers need to be continuous learners. In effect, professional development sessions must be collegial, self-directed, and connect with previous knowledge while constructing new knowledge. Similarly, professional development needs to ground teachers in how to give all students equitable treatment, and involve teachers and management in collaborative work and problem solving that apply to a classroom setting.

Section 2 of the study addressed relevant scholarly literature on the concept and cultural framework of professional development. It makes the research problem clearer.

Section 3 of the study describes the research design. It logically addresses the problem statement and research questions and discussed the appropriate data collection method for this research design.

Section 4 of the study presented the findings clearly. It showed the reasons why collegiality should be preferred to the traditional methods of professional development.

Section 5 gave a logical and consistent conclusion and recommendations. It contains the references and the appendixes.

SECTION 2

LITERATURE REVIEW

Introduction

The purpose of this quantitative nonexperimental design literature review was to show how professional development that allowed teachers to take charge of their own development as they practice in their classrooms with their peers (collegial coaching), results in school improvement. When teachers engage in collegial relationships, they share instructional strategies and they have the opportunities to exchange views about their personal classroom experiences, their challenges and solutions (Lawson, 1994). Over the years, the performance of professionals in the medical and teaching fields has been of great concern. For example, Professional Development Schools (PDSs) came into being because of the need to restructure schools. As schools continue to engage in well-structured professional programs, one will begin to see the benefits as they reflect on student achievement. The literature review focused on collegiality, job-embedded professional development, and collaborative leadership. Again, social change, data collection method and use in school improvement were of great importance in the review. The tone of the review was set by the historical background of PDSs.

Historical Perspective

In the 1980s, reformers of primary and secondary schools were concerned about how to align the novice teachers with the innovative ways of teaching as opposed to the ways that new teachers were taught. The new schools which were developed and structured to handle learner and learning-centered environments were PDSs. Many other names such as induction schools, teaching schools, and partner schools were given to these schools (Deer & Williams, 1995). These were a kind of partnership schools that differed from the former laboratory schools. Levine and Churins (2000) pointed out that the new collaborative schools provided the venue for enriching the clinical education of the novice teachers through the concerted effort of the universities and the schools.

Levine and Churius (2000) maintained that the reform-minded groups such as the Holms Group and the Task Force on Education and the Economy were aggressively involved in developing innovative schools that would offer both the veteran and novice teacher continuous learning in the profession. The aim was to change the way schools are managed by restructuring the defined organizational ladder to that which is more collegial and cooperative in nature (Deer & Williams, 1995). The main objective here is professionalization of teaching. (Levine, 1992) credited Dewey as the originator of the key concepts of PDSs. Flexner, who laid the foundation of American teaching hospitals was said to have been influenced by Dewey's teaching (Levine & Churins, 2000). Schindler (1906) reported the activities of Flexner as he was involved in making the medical schools in the United States and Canada comparable to the ones in Europe.

Levine and Churins emphasized, "Flexner stressed the importance of teaching and learning in clinical settings and the relationship between research and practice" (p.180).

The PDSs were modeled on the pattern of the teaching hospitals for doctors' clinical training (Zeichner, 2005). Every teacher who went through teacher training college understands the importance of learning to teach in the actual school setting. During this period of apprenticeship, the teacher candidate understands what teaching is as he/she is being coached by the cooperating teacher. It was hoped that the ideals of the professional development schools would be transferred to other schools. However, not every school will be a professional development school just like every hospital is not a teaching hospital (Deer & Williams, 1995). Zeichner pointed out the following goals for professional development schools:

1. The improvement of pre-service teacher education.

2. The improvement of professional development for existing staff (including university staff).

3. The establishment of a closer connection between research and practice by fostering an inquiry culture in schools.

No doubt, these goals were designed to enhance school improvement in the schools affected. Myers (1934) envisioned that the school cannot prepare students to function effectively in the changing social environment in the absence of basic reforms in the selection and preparation of teachers. Myers saw the selection and preparation of teachers to be of utmost importance. He argued that if schools were to build a better society, teachers must be equipped with the necessary skills to accomplish the task.

Hind (2002) suggested that teachers need to be very knowledgeable in their

content areas and teaching skills, so that they can perform more than the nation

understands or appreciates. Then the public and the political leaders will begin to see the

need to invest in comprehensive teaching reform. Hind argued that teaching was not seen

as a highly-skilled profession, but has been taken as an art, craft or second-rate

occupation. Hind (2002) contended that the need for improving schools dates back to

World War II and the same was true with the importance of hiring and retaining good

teachers with the knowledge and skills needed to service children. Yet, for more than 40

years, qualified math and science teachers were in short supply (Hind, 2002). Rather

than making the teaching job attractive for qualified people, the standards for entering

into the profession were lowered. Teaching continued to be regarded as a low-status job

meant for women. Darling-Hammond and Decommun (2007) argued that the nation has

more certified teachers than required. The actual problem is that of unequal distribution

of qualified teachers to where they are needed. The researchers claimed that what has

created a shortage of teachers was the scarcity of teachers who can accept poor wages

under inequitable conditions. Again, during the years after the war, women were still

limited to teaching and high-paid, non-professional jobs. Therefore, the need for school

reform was not imminent. As soon as women broke into other professions in the 1970s

and 1980s, the shortage of teachers ensued. Thereafter, the government designed or

created school reforms. Hind (2002) stated, "Unfortunately most policymakers put the

cart before the horse: they launched school reforms without teaching reforms-as if

reducing class sizes or raising student standards for all students were self-fulfilling improvements" (p. 2).

Good teachers, as experts in their content area and pedagogues can make a difference in the education of their students especially when they are in a school with a culture of collaboration. Curris (2001) observed that teacher education colleges of the 20th century provided their students with excellent education that translated into the nation's great advances in science and technology. The new century with its challenges, calls for new strategies for teacher preparation that meet the current standards. Though many teachers were well prepared in the last century, they need to be updated in their skills by means of high quality professional development that makes them competent and efficient.

Curris advocated for the help of the American Association of State Colleges and Universities (AASCU) in solving the evolving problem of teacher shortage in the areas of math, science and special education, particularly among ethnic minorities and certain geographic areas.

The Importance of Collegiality in Professional Development

Professional development that is collaborative in nature is more likely to be implemented in the classroom. Lieberman and Wood (2001) cited an example with the National Writing Project (NWP), which assumed a different approach for professional development. The researchers regarded teaching as a profession that involved on-going learning, practical demonstrations, and assessment. They suggested that teachers should

not be given ready-made answers, but should be led to find the answers through the

collaborative effort of the regional and national networks of teachers. This networking

method of professional development helps teachers construct knowledge in their own

development. Contrary to professional development techniques that do not differentiate

instruction for teachers, networking helps teachers work in their areas of interest.

Though networking also makes use of lectures and workshops, teachers work in

collaborative and collegial groups where they represent their own personal interests. At

the same time, these teachers assume leadership roles among their peers.

The professional development network enables communities of learners to work

with shared purpose and support that lead to classroom improvement (Lieberman &

Wood, 2001). Researchers identified common characteristics of 16 educational reform

networks, which include some of the following:

1. Agenda more challenging than prescriptive,

2. Learning more indirect than direct,

3. Formats more collaborative than individualistic,

4. Work more integrated than fragmented,

5. Leadership more facilitated than directive,

6. Thinking that encouraged multiple rather than unitary perspectives,

7. Values that were both contact specific and generalized, and

8. Structures more movement-like than organization-like (Lieberman &

   Grolnick, 1996, p.20.

Inger (1993) argued that though collegiality may not produce the same degree of effective result, teachers who worked collaboratively observed reasonable amounts of success in student achievement, behavior and attitude. For instance, when teachers in a junior high school worked together in planning their curriculum, testing and placement procedure, they achieved substantial improvement in math and student behavior. In the same vein, collegiality encourages interaction among teachers, thus dispelling isolation and fostering enthusiasm.

Teacher collegiality avoids the uncertainties that beginning teachers usually face. Inger (1993) observed that experienced and beginning teachers reciprocate their experiences, thus helping the new teachers to gain competence and confidence.

Coaching is a kind of collegial activity in which teachers work together to help each other. According to Dantonio (2001), the success of collegial coaching depends on trust, shared vision, values and goals among teachers. In addition to common understanding and interest in researching into the theory and practice of education, the coaching model assumes all participants are qualified, able and willing to help in the professional development of fellow educators. Dantonio pointed out that collegial coaching is different from the staff development and in-service training which are conducted by the management in many schools. Collegial coaching is a one-on-one collegial activity among equals and could be a school-wide model. Turner (2005) posited that coaching, mentoring and peer networking are becoming very popular in professional development programs worldwide. Peck (2005) maintained that as teachers become used to collegial interactions with their peers in their development, their horizons for learning

widen to include collaborative research within their classrooms. "Teachers need the opportunities to see examples of what 'better teaching' looks like in practice and to observe student learning" (Peck, 2005, p.1). Inger (1993) posited that teachers develop self-confidence when they work collaboratively. They are able to try innovations that would puzzle an individual.

Hargreaves and Dawe (1990) argued that collaborative professional development assumes two opposing forms of discourse. First, it makes teachers effective and powerful in their professions through group work. Second, teacher isolation is designed to enhance important new teaching styles that are imposed by foreign experts. Teachers in effect become technicians rather than professionals who have initiatives. Hargreaves and Dawe added that it is not surprising that the purpose and objectives of collaborative professional development are misconceived.

Hargreaves and Dawe (1990) defined coaching as a method of transferring skill and expertise from more experienced and knowledgeable practitioners of such skill to less experienced ones. Coaching, as a form of professional development, does not only explain or demonstrate the desired skills, but depends on a cordial relationship between the coach and student, expert and novice. There is effective interaction while the student is engaged in a practical learning process of the skill that needs to be developed. The collegial relationship in this case is strong, cordial and trusting (Hargreaves & Dawe, 1990). Although there are different types of coaching, the purpose of each type is to improve instruction.

One of the peer-coaching methods, technical coaching, emphasizes the addition of new skills to already existing knowledge. It was widely used for the introduction and implementation of new techniques of teaching. The model was made of three components, namely presentation of theory, modeling practice and feedback (Hargreaves & Dawe, 1990). In coaching, peers utilized observation and non-evaluative feedback to master a specific skill. The training process assumed two parts. In the first part, teachers use assessment forms to report their feedback particularly when new skills were practiced in the classroom. The second part constituted verbal interactions. The partners combined effort to experiment and solve problems. This process helped teachers to implement what they had learned in actual classroom practice. As teachers practice these skills regularly, they became more efficient, improve instruction and create social change.

Development of Individual Skill

Effective schools build on the strength of members of their staff (Beachum & Dentith, 2004; Hargreaves, 2005) and continually support teachers for professional development (American Federation of Teachers, 2007; Learning Point, 2007; Lieberman & Miller, 2005). Teachers learn by formal and informal ways through collegial relationships that enhance professional growth of individual teachers. Glazer and Hannafin (2006) showed how the collaborative apprenticeship model utilized four different professional learning phases to model various professional learning activities as follows:

1. Introduction phase: A teacher leader presents a new teaching method or resource to mentor peers. The peers share goals and develop new ideas.

2. Developmental phase: Teacher leader and peer teachers collaboratively design, develop, and implement a new learning activity using new techniques.

3. Proficient phase: Teacher leader involves less-experienced teachers in the development of learning activities

4. Mastery phase: Peer teachers are no longer helpers but key stakeholders in   the development and implementation of new teaching strategies (pp.183-185).

The roles of individual members of the apprenticeship changed after the mastery phase. This was more so when there was a new professional learning activity. Invariably, the apprenticeship involved the group in a series of collaborative learning projects that resulted in individual professional growth.

Little (1994) maintained that professional development at school level assumes the nature of support for new teachers, consolidation of professional opportunities for experienced teachers and a test for decision-making. Teachers in effect were looked upon to enhance the support of new teachers and to contribute in various ways in the effective education of students.

Shank (2006) investigated the effect of storytelling in teacher learning and school improvement. A collaborative inquiry group (CIG) was formed at a Midwestern rural school. The collaborative group concluded that the only way they can effect change to improve the school was to examine their current practices, not as consumers, but as contributors. They decided what needed to be changed and designed their experiment to

solve the problem through collaborative investigation. On a regular basis, the group

meeting discussions assumed the nature of storytelling. Initially, it looked like the stories

would divert attention from important issues, rather than learning from each other. As

the researcher thought about the importance of the stories told, the researcher understood

what the stories revealed about classroom practice. Sharing practice helped the

investigation group to understand the experience of each member of the group. Thus

instead of being an obstacle to the learning, the stories enhanced learning (Little, 1994),

serving as a learning tool.

Teaching portfolios are another instrument that can help teachers develop

individual skills (Wolf, Athanases, & Chin 1988). Portfolios can include lesson plans,

student assignments, teachers' written descriptions, videotapes of instruction and

informal evaluation by supervisors. Although the preparation of portfolios can be

challenging and time consuming, they can give insight into a teacher's professional

practice. Portfolios can reveal a teacher's weaknesses and strengths, thus showing where

professional development was needed. Wolf (1996) maintained portfolios are not only

important for assessing teachers' performance, they help teachers with self-assessment

and collegial interactions when based on written records of their own practice. Similarly,

Wolf explained further that portfolios create an incentive for teachers to be continuous

learners. In some states, portfolios that meet professional standards earn their owners

performance bonuses or national recognition by the National Board for Professional

Teaching Standards 1987.

Leadership

The pressure created by accountability and standardized testing has made some principals fail to delegate authority (Katzenmeyer & Moller, 2001). They underrate the experience and professional acumen of the teachers as it affects curriculum and instruction. They fail to give teachers the opportunity to participate in leadership of the school. Katzenmeyer and Moller argued that although the nature of the teaching profession makes each teacher a leader, teachers do not acknowledge their status as leaders if they have no hand in the decision making of the school.

The school just like any other organization works like the human body (Neuman & Simmons, 2000). All the parts of the body must work together to produce a normally functioning person. In the same way, the school community must work collaboratively to produce an effective school. Hord (2004) contended "administrators along with teachers must be learners: questioning, investigating, and seeking solutions for school improvement and increased student achievement" (p. 8). In other words, functions should not be strictly defined for teachers, administrators and students. There needs to be supportive and shared leadership to achieve the values and vision of the school. Hord advised teachers to use the school vision as a yardstick for decisions affecting teaching and learning in the school. Therefore, the values and goals embedded in the vision need to direct the school community. It is necessary that the school principal continually communicates the vision of the school.

As teachers continue to work together, they build a trusting relationship. When teachers begin to trust each other, they feel free to share their classroom problems with

specific students, classroom management, instructional procedures and content knowledge. Similarly, teachers begin to visit other classrooms to observe good classroom practice. The collaborative relationship thus results in teacher learning and student achievement. Effective school principals enlist the expertise of the staff in decision- making (Hord, 2004). Teachers who participate in decision-making are motivated and regard decision making as part of their jobs.

Effective principals do not only enlist the expertise of members of the staff, they also influence the staff to become teacher leaders. Katzenmeyer and Moller (2001) argued that school change is an intricate process that calls for the collective effort of the school team. With this in mind, effective principals do everything it takes to empower teachers and make them believe they are leaders. "By helping teachers believe they are leaders, by offering opportunities to develop their leadership skills, and creating school cultures that honor their leadership, we can awaken the sleeping giant of leadership" (p. 2).

Crowther, Kaagan, Ferguson and Hann (2002) maintained that leadership in a school setting is very demanding. Consequently, one cannot expect all teachers to meet the qualities of leadership. Nevertheless, teacher leadership thrives in a school culture that is supportive in nature. Unfortunately, the schools that have these favorable cultures are few. Even in the presence of the said obstacles, there are teachers who possess the energy, experience, and confidence for teacher leadership but are not motivated by the school. They are ignored and are not given the opportunity to participate in forums for

policy-making. This kind of treatment, Crowther and colleagues claimed, has caused

schools educational reform and reduced the status of the teaching profession.

Constructivism

Collegial learning stems from constructivist theory. Joyce and Showers (2002)

remarked that educators have begun to understand the importance of collaborative study

and problem solving, as they affect their growth in the profession. These two researchers

advocated for teachers' collegial work in staff development so that they can construct

meaning, master and use innovative practices and content. Hicks (1997) maintained that

although the traditional professional development models are used with good intentions,

they do not effect changes in the classroom. Unfortunately, schools continue to depend

mainly on short-term in-service sessions and graduate level courses to upgrade teachers'

professional competence. Hicks added that a constructivist learning community builds

knowledge from bottom up and is preferable to a one-shot model. Furthermore, a

constructivist model, Hicks continued to argue, does not accept the top-down instruction

method of the traditional programs. A professional community is always involved in

ongoing problem-solving activities with peers.

Berns and Erickson (2001) attributed the evolution of technical education in the

20th century to David Snedden and Charles Prosser who theorized that the public schools

constituted a branch of the social system and therefore had a duty to contribute to social

wellness. At this time, when constructivism was evolving, contextual teaching and

learning (CTE) was used to train efficient workers who served the needs of the society.

Berns and Erikson presented constructivism as a teaching and learning method in which learners construct their own knowledge based on previous knowledge. Berns and Erickson maintained that although both behaviorism and constructivism have the same potential of engaging students in active learning activities, CTE has not embraced constructivism in vocational education. The field of vocational education preferred constructivism, but the nature of its curriculum was most suited to behaviorism.

Similarly, Kronley and Handley (2001) contrasted theories of adult learning. The two researchers felt that there are occasions when the traditional lecture method is the most suitable method of instruction. Nevertheless, active learning more often than not, takes place through different modalities, which includes discussion with colleagues and experts, observation, practice, collaborative inquiry and classroom-based research. The learning models that involve teachers in active participation provide models that can be transferred to the classroom. Invariably, when teachers learn by example, they are able to put into practice what they learned in their classrooms.

Role of Professional Development in Teacher Leader Development

In the 1960s through 1990s, research on the relationship between teachers and student achievement had two phases. The first phase paid attention to generic teaching-skills, which involved time management, discipline and group management (Research Points, 2005). These studies did not show much improvement in reading and arithmetic; however, there was remarkable improvement in reasoning skills. A study of urban fourth-grade mathematics students who came from low-income families was a typical

example. The students made great improvement when lecture/discussion-method was used. Similarly, student performance was high when teachers taught new materials with guided practice.

The 1990s saw a wave of research that investigated student learning in great detail. During this period, the emphasis was on students' abilities to reason and solve problems in addition to basic skills. Research Points (2005) argued that professional development can immensely influence teachers' classroom practices and result in student success when it is based on how:

1. Students learn a particular subject matter.

2. Students' understanding of a specific subject matter relate to instructional practices.

3. Teachers enrich content knowledge in specific areas.

Research Points (2005) maintained that, "Close alignment of professional development with actual classroom practice is the key" (p. 2).

Carpenter, Fennema, Peterson, Chiang and Loef (1989) carried out a study in which first-grade teachers were divided into two groups. One group was put in a professional development program, which exposed them to research on how students learn simple arithmetic calculation and problem solving. Conversely, another group of first-grade teachers had professional development on mathematical problem-solving strategies rather than on how students learn. It was found that teachers in student learning workshops aligned their teaching in different ways to handle complex problem

solving. Contrarily, teachers who were in the other workshop were concerned with basic fact recall, short cuts to answers and individualistic learning.

At a time when professional development was geared towards the learning of students and its effective measurement, students' achievement was high. In addition, there was an increase in students' basic and higher reasoning and problem solving skills. This showed that professional development which dealt with subject-matter content and student learning resulted in student high achievement. Similarly, Kronley and Handley (2001) argued that extended practice time for new skills is not valuable, if the skills do not make sense to the teachers and do not lead to students' success. Professional development curriculums need to have direct connection to teachers' content knowledge, the teaching and learning of students.

In a study carried out by Ragland (2007) to change teaching practice in secondary school history classrooms, teachers were required to change their attitudes and views in teaching history. The needs assessment before the training showed that only seven out of the 20 participants had majored in history. The rest of them indicated they had deficient knowledge in key content areas of American history. Furthermore, the instructional practices of the teachers who had deficient knowledge were not research-based. Initially, a goal that would improve teachers' knowledge, understanding and teaching strategies, including interest in American history was set. Thereafter, a program of professional development that lasted three years was implemented. In order to make the desired changes, the curriculum was planned to meet the content area needs of the participants and the application of their content knowledge to their classroom practice. During the

program, there were follow-up sessions to help teachers effect the required changes in their instructional methods. Participants were also observed by history, education and peer observation teams. Peers were able to give non-evaluative feedback. Similarly, teachers prepared personalized Instructional Change Plans for the school year and reported their progress.

The findings in this project showed a change in attitude and the teaching of history. Teachers encouraged their students to develop interest in the American past. They made teaching of history exciting, active and engaging by using primary sources and artifacts. Thus, the teacher-centered, lecture-based, whole class structured practice, with emphasis on covering the syllabus and retention of facts, was replaced with teacher-directed instruction, inquiry and cooperative learning. Teachers need to demonstrate high professional ability both in content and pedagogical skills. Mishra and Koehler (2006) argued, "A teacher who has deep pedagogical knowledge understands how students construct knowledge, acquire skills, and develop habits and dispositions toward learning" (p. 11).

In another instance McCutchen, Abbot, Green, Beretvas and Cox (2002) studied two groups of kindergarten and first-grade teachers. One group had training for teaching word sounds and structure. The other group did not receive training. It was found that the teachers who received training taught reading skillfully and their students performed better in comprehension.

In an effort to accomplish research based reading instruction in the state of Alabama, a panel of 25 people from different walks of life was set up to develop the

Alabama Reading Initiative (ARI). The goal of the ARI was to underpin and hone reading from kindergarten to the 12th grade to achieve 100% literacy in the state (Alabama Commission on Higher Education, 2000). Though all the schools in the state were qualified to become Literacy Demonstration Sites (LDSs), it was important that the prospective school sites clearly understood ARI's goals, vision and program content. It was also vital that the involved schools became aware of the need for the principal and almost the entire faculty to commit to intensive professional development at the summer institute.

During the second year of the ARI, the following groups of people were involved in the program: teachers, principals, reading specialists, higher education partners to those schools and student teachers in Alabama's Institute of Higher Education (IHEs) (Alabama Commission on Higher Education, 2000). Evaluation of the program showed that ARI schools made more progress toward 100% progress in reading comprehension, vocabulary and overall reading than non-participating ARI schools. Also, Stanford 9 scores showed remarkable progress in attaining 100% progress in the reading subtests. The percentage of struggling readers decreased while there was an increase in students scoring at grade level.

The leadership of the principals of the ARI schools enhanced the success of the initiative immensely. The principals were proactive; they created an environment that was conducive to the success of the program. Teachers were not only encouraged to implement reading instruction in their classes, but were monitored to assure compliance. Contrarily, the low-performing schools received no encouragement from their principals.

Overall, teachers expressed that ARI enhanced their teaching and student performance. They also acknowledged that they were helped to adopt research-based techniques, thus gaining in-depth knowledge and interest in reading instruction and were able to devote more time to student reading. Additionally, struggling readers were serviced in a friendly learning atmosphere.

The need for continuous teaching and learning gave rise to a study that evaluated the effectiveness of a professional development program that was designed to support student achievement (Dixon & Scott, 2003). The emphasis on professional development is no longer on equipping teachers with in-depth pedagogical expertise, but to ensure that professional development engenders collegial interaction among teachers, increases student learning and satisfies the institutional goals and visions (Dixon & Scott). The researchers adopted a model which mirrors effective teaching strategies and attitude and is able to show how professional development results in student learning.

This professional development model included (a) brainstorming the qualities of good classroom teaching, (b) tips on successful teaching methods, (c) critical analysis of planning, (d) organizational skills, (e) the importance of activity and interaction, (f) collegiality, (g) conducive learning atmosphere and (h) the importance of introduction and evaluation in teaching (Dixon & Scott, 2003). The necessity for implementation in each teacher's classroom was stressed.

Data collection was by means of a survey instrument that made use of open and closed questions, thus giving rise to both quantitative and qualitative data. Four primary items of the offshore staff development program were surveyed: planning and

organization, presence of a friendly learning atmosphere and effective teacher characteristics (Dixon & Scott 2003). Moreover, participants were required to elaborate on their responses, hence they were content analyzed.

The results showed that most of the participants had positive reactions to the interactive nature of the staff professional development (Dixon & Scott, 2003). The participants maintained that discussion of real-life problems about teaching and learning, as well as interaction with students and peers on ideal teaching techniques made the program effective. Most of the participants indicated the willingness to take part in future sessions which address teaching and learning. However, some comments advocated for increased role-play which demonstrate best practice.

According to Brown (2002), the concern over the basic skills in primary level mathematics gave rise to a study in England to determine how different factors affect student achievement. The factors include home conditions, student behaviors, teaching methods, teacher content knowledge, the school policies and leadership (Brown, 2002). The researchers assumed that knowledge of the causes of low performance would make it possible to plan for effective reform strategies. The study utilized a longitudinal survey and a case study to generate both quantitative and qualitative data.

To determine how teacher's beliefs about knowledge of and teaching strategies in mathematics affect performance, the participating teachers were observed before, during and after exposure to a short program of professional development (Brown, 2002). Though factors such as home conditions and student behavior have much part to play in student performance, it was found that professional development coupled with whole

school action effectively influenced implementation of change in curriculum, teaching methods and consequent high performance.

Similarly, Wycoff, Nash, Juntune and Mackey (2003) reported that a study was carried out in Texas to understand the various professional development options available for the teaching of the gifted and talented. Also, the study was designed to find out which skills and knowledge gained from professional development was effectively practiced in the classroom. For the purpose of finding out all the facts that may not be satisfied by an ordinary quantitative study, a case study approach was adopted. The study was seeking to:

1. Describe the type of gifted and talented training of middle school teachers of the gifted students, as a means of gaining an understanding of the knowledge and skills presented to the teachers through professional development opportunities.

2. Investigate areas of strength and weaknesses in training as perceived by the teachers.

3. Analyze outcomes of knowledge and skills observed in the classroom gained from professional development opportunities. Denzin and Lincoln study (as cited in Wycoff et al., 2003, p. 3).

Teachers were involved in enrichment programs varying from campus-based workshops, district workshops, state and national conferences to university endorsement courses.

Since it is important to implement what is learned from the professional development program in the classroom, the staff development was designed to include a mix of models, such as (a) individual guided, (b) study groups, development/

improvement process and (c) inquiry model (Wycoff et al., 2003). It was observed that different models met the expectations of the district. There was a huge success in the individual guided model and study group where teachers chose to be attached to a book study, video study or to personal growth plan to meet their individual needs. Teachers chose topics they were interested in and were not forced to attend workshops for merely fulfilling the school district's requirement of credit hours.

In one of the workshops, the teachers built learning bulletin boards stressing productive thinking strategies. Soon after the workshops, teachers introduced bulletin boards that enhanced individualized learning in their classrooms. Again, the inquiry model afforded the professional development participants freedom of choice in their areas of interest. Though they earned gifted professional development credits, the knowledge gained was practically demonstrated in the classroom.

One begins to wonder how much professional development is enough or how well it is working. Research Points (2005) pointed out favorable teachers' remarks about professional development that included focus on content knowledge that teachers said made the greatest impact on their ability to improve teaching practice. Another factor included coherence, which considered previous knowledge in developing professional development to reflect state and district standards and assessment.

Professional development that takes the form of group participation by teachers from the same school, department or grade levels are more likely to produce effective results. This is more so, as pointed out by Research Points (2005), when it involves "Observing and being observed when teaching and planning for classroom use of what

was learned in professional development. In addition to reviewing student work, giving presentations, leading discussions and written work." (p.3)

The importance of adequate time for effective professional development cannot be over-looked. Professional development that is enduring tends to produce better results (Research Points, 2003). Nevertheless, adequate time is not the single factor that determines the success of professional development. If the focus is not on subject matter as proven by research, adequate time has no effect in influencing the desired effects of professional development.

A Vision and Approach to Professional Development

The effort of teachers is not the single factor that affects school reform and student achievement. It needs the partnership of all the stakeholders to establish a high achieving school. The principles of effective professional development stipulated by the U S Department of Education placed more emphasis on vision and approach for development than it did for its exact structure (Kronley & Handley, 2001). The principles include:

1. Focusing on teachers while involving other members of the community in improving student learning.

2. Emphasizing individual, collegial and organizational improvement.

3. Promoting continuous inquiry and improvement.

4. Ensuring that professional development is driven by a coherent, long plan to improve student outcomes (p. 8).

According to the South Regional Board (1998), advocates for school reform have not set hard and fast rules for schools and districts to harness their competences in building learning communities. There needs to be a kind of collaboration that takes the form of partnerships with universities, teachers, students and parents with a view to focusing on learning that has challenging content (South Regional Education, 1998). Furthermore, schools need to delegate functions that were originally monopolized by the administration. Schools and districts must use their own peculiar approach for building strength. A national survey of more than 1,400 schools by Hazel Associates (2006) found that there was lack of communication between principals and teachers about needs assessment in professional development. Teachers should be allowed to be key players in deciding the nature of professional development to be delivered.

A school organization can build capacity by supporting new teachers to the profession by means of mentoring or mandated peer corporation. Cole (1991) asserted that new teachers who lack administrative support fail to stay and develop their teaching skills. Cole further contended that an assigned partnership has some flaws; i.e. though it aims at orientation, technical assistance and improved performance, its horizon is not wide enough to include more than two teachers. Consequently, the new teacher has no opportunity to be influenced by many other teachers, neither do many other teachers benefit from what the new teacher has to offer to the teaching community.

The New Approach to Professional Development

Research on professional development has focused on its design; therefore,

making it possible to distinguish between what encompasses transformation in teaching

practice, its effect on student learning and what does not constitute noticeable change.

The design of professional development may meet the goals of the district and school but

fail to succeed because of poor delivery (Kronley & Handley, 2001). Professional

development has continued to assume the traditional model and has failed to build

enough strength to transform practice and influence learning (Dalany & Arredondo,

1998; Kelly, 2000; Kronley & Hanley 2001; McCafferty, 1994; Muth, Polizzi & Glynn,

2007). They further posited:

> Professional development programs traditionally have been short-termed
>
> (limited content hours and few periods of interaction); disconnected from
>
> classroom practices; unrelated to curriculum or student learning; and detached
>
> from vision of school or district reform and a comprehensive plan to implement
>
> that vision. These approaches are not supported by literature (p.10).

Professional development needs to focus on the improvement of the academic

performance of all students. It does not matter who is organizing the training program,

the important thing is to put teachers at the center, using dialogue and inquiry techniques

(Kelly, 2000). Recent research in cognitive sciences, philosophy and multicultural

education recommended improved approaches in teaching and learning that include love

for learning, respect for oneself and others (Hixon, Judson, Tinzmann, & Banker, 1990).

A positive attitude will result in meaningful learning, which in turn reflects on the

objectives of the curriculum, pedagogy, assessment and the overall social structure of the school. Showers, Joyce and Bennett, (1987) affirmed most teachers will practice what they learned in training programs in their classrooms, if the instruction was made up of four parts, namely: presentation of theory, demonstration of the new strategy, initial practice in the workshop and prompt feedback about their effort.

Researchers are replacing the traditional professional development models, which though well intentioned, lack support, follow-up or feedback, with models that are supported by literature. The effective models have the following characteristics:

- They have extended duration and clear purpose.

- They are connected to a school or district's theory of change.

- Again, they are drawn from a clear vision of teaching and learning and contain well articulated goals.

- They are designed to be flexible in form and willing to reflect and change.

- They are collaborative in nature, have support from leadership, and rely on proven theories of adult learning.

- While research based, they are aware of and responsive to content (Cronley & Handley, 2001. p.11).

Viewing professional development as a kind of adult learning, Peredo (2004) suggested that professional development programs need to be aligned with the adult learning style. For instance, since adults are self-directing and build their learning on previous knowledge, they should be allowed to control their learning while at the same time constructing new knowledge. By the same token, when professional development

sessions are problem centered, adults are better engaged and encouraged to take risks thereby increasing their repertoire of knowledge. Peredo further posited that professional development programs that consider the knowledge level, inclination, and tasks of participants, tend to produce better results in the classroom. Muth, Polizzi, and Glynn (2007) considered professional development opportunities that immerse educators in inquiry, reflection, critical thinking and problem solving as an ideal program. New Jersey Department of Education (2001) stipulated that professional development programs must fulfill the needs of the educator and enhance the goals and objectives of the district. Again, professional development must involve the school staff in collegial and collaborative interactions whereby matters that affect students' success are deliberated and implemented. New Jersey Department of Education believes that since exemplary educators are life-long learners, they have to engage continuously in professional development in order to keep fine-tuning their teaching skills.

The Importance of Data in School Improvement

In this scientific age, it is no longer good to make decisions by assumption or by intuition. According to Johnson (2000), effective educators make effective decisions based on accurate information. Clearinghouse on Disabilities and Gifted Education (2003) asserted that examination of data enables educators to determine successful strategies and unsuccessful ones. In spite of the importance of data-based decision making, there is unwillingness to use it. The reluctance to use data is caused by the task and the time consumed in collecting data. Often there is no data for everyday decision-

making. Moreover, data collected are used negatively for punishment. However, data used for school-based decision-making is very beneficial (Eric Clearinghouse on Disabilities and Gifted Education, 2003). Jenks School District, which is situated south of Tulsa, Oklahoma, attributed its success in school improvement to data-based decision making. Kirby (2006) pointed out that the school district's data- based enduring improvement effort was geared to academics, arts, athletics and attitude, and was combined with effective leadership, professional development and technology to achieve excellence in teaching and learning.

For many years, the Office of Special Education (OSEP) supported research geared towards the achievement of special needs students. Researchers are now focused on the use of scientific data to improve the performance of students. Furthermore, researchers are making inquiry into how data-based decisions affect positive behavior support systems. Again, they are using data to foster school improvement and to assess instructional programs related to the curriculum. In states such as Hawaii, data affects the nature of training process of staff who monitor the behavior of students. Team members use data for self-assessment and problem solving. Data helps the state and district to assess the achievement of students with disabilities. This is more so when the state wants to determine if schools are in compliance with the stipulations of the Individuals with Disabilities Education Act (IDEA). School improvement policy decisions are based on statewide data. In addition, districts use data to determine the progress of students and areas that need improvement. Data are used continuously to monitor students' behavior in a system of behavior support. Data helps teachers to carry

out curriculum-based measurements. Teachers also use data to monitor and measure the progress of their students in different subject areas to determine how to adjust instruction (Eric Clearinghouse on Disabilities and Gifted Education, 2003). In an outstanding effort to achieve successful outcomes, the school district of Newark, New Jersey, created an internal monitoring team. The team toured classrooms to ascertain the correct alignment of the intended curriculum with skilled pedagogy and to observe school climate and administrative activities. In Newark School District, "the collected data became part of an educational audit that is shared with the building principal" (Brown & Spangler, 2006, p. 3). Moreover, the researchers stressed how the school embraced success through constant meetings in which teachers discussed how they teach and improve in their practices. Teachers made data-based decisions and parents had available information that helped them collaborate in their children's education.

Penn-Delco School District, which is situated in a suburban area outside Philadelphia, uses a system called the walk-through process to collect data that leads to collaboration and school improvement. The walk-through process is composed of a team of educators and invited members of the community, who tour the classrooms looking at students' work, pulling the students out from their classes and interviewing them in the hallways to find out their classroom experiences. The data collected are used to determine the areas that need improvement. Penn-Delco School District concluded that the walk-through process leads to "authentic use of data, a culture of collegiality among staff, reflective discussion about teacher practice and a focus on student achievement" (Abrutyn, 2006, p. 57). In California, the central office collects data from different

schools by means of walk-through. The data collected helped central office to assess the progress of the students. Bloom, (2007) added that one school in Tennessee schedules grade-level teams to implement what they called a *learning walk* in different classrooms. That is having team members visit classrooms, to collect data and later determine the success of a specific strategy in use.

Appropriate Data Collection Process and Procedures

Creswell (2003) showed different ways of collecting data, highlighting that each method has its advantages and disadvantages. The different methods included observation, interviews, collection of documents and audio and visual materials. Observation involved the researcher in taking field notes on activities at the research site. In this way, the researcher can take notes on actual happenings that may reveal details. On the other hand, the researcher may not be well received by the participants and therefore may not get unbiased information. Another method was interview in which the researcher interacts with the participants face-to-face, in groups or by phone. In this method, the researcher controls the interview and can get full narrative of the subject matter. However, it does not provide information in a natural setting. Yet the researcher's presence can affect the responses. Information from documents may take the form of public documents, such as newspapers, minutes of meetings, official reports or private documents. These sources save the researcher time and money. They can be obtained at the researcher's convenience. However, the materials may be incomplete,

inaccurate and unreliable (Creswell, pp. 185-188). The kind of data required determines the method of collection.

Summary and Section Overview

Section 2 contains a review of the literature on origin of professional development schools and the school reforms. It discussed how well-designed professional development can help schools meet the demands of the school reforms and increase student achievement. The importance of accurate data collection in school decision making was reviewed. Section 3 will treat the methodology for finding out how professional development (collegial activities) can help improve schools.

SECTION 3

RESEARCH METHOD

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This research was focused on the importance of professional development and collegiality in school improvement and student achievement. This section drew attention to the reasons why traditional professional development programs should be modified or changed to what works in the 21st-century classroom. According to Creswell (2003), a quantitative study engages the investigator in a postpositive claim while developing knowledge. In other words, the researcher employs cause-and-effect logical thinking, measures, tests theories, uses surveys and instruments to accumulate statistical data. Babbie (1990) ranked survey research as the best instructional method of teaching in social science and also claimed that ingenuity in survey research predisposes a researcher to the excellent use of the other social science research methods. Moreover, the structure of survey research allows for in-depth development and logical analysis of accumulated data.

Babbie (1990) further explained that sample surveys do not only describe the sample being studied, but are sources for better understanding of the total population represented. Again, survey design generates many quantifiable variables that are easily processed by the computer, thus making it possible for the researcher to construct various illustrative models and then choose the one that is best suited to the objectives of the study. Fink (2003) maintained that surveys play an important role in the social and

political lives of many developed countries, more so in the United States of America. For instance, the US elections involve polls. Similarly, the US census is a typical survey.

I described the design and approach used in this study, the place the subjects were recruited and the place the research took place was also explained. Again, I described the process of gathering data and the instrument used. The data analysis method and the measures taken to protect the interest of the participants are explained. The quantitative nonexperimental research method was the most appropriate design for this study. It used five key factors of professional development such as collegiality, research based practice, content knowledge, differentiation of instruction and practical application of what was learned in professional development sessions to answer the research questions. Vandeweghe and Varney (2006) pointed out the sources of discomfort that are prevalent among teachers. The sources included top-down administrative mandates, the practice of bringing in outside experts to tell teachers how to teach well, lack of connection between school-based professional development and the actual classroom setting. This research method was chosen not only to determine the importance of professional development and collegiality in the improvement of schools, but also to determine how the models used can help apply the knowledge gained to the classroom setting.

Research Design and Approach

The quantitative nonexperimental study used the cross-sectional survey method to identify the possibility of using professional development to help school improvement. This method was selected because data were collected at one point in time. It is not only

a means to describe systematically the effect of professional development in school improvement, particularly when teachers are allowed to work in collegial groups to control their own professional development. It is also a means to evaluate the effects of these variables at the time of this study (Babbie, 1990). Quantitative research in professional development is of great importance to researchers, policy makers and practitioners. It supplies answers to assumptions about effectiveness and thoroughness. It is best suited in answering questions about what works in the classroom and in what kind of setting or context (Bernard, Abrami, Lou, & Borokhovski, 2004). The New Jersey Department of Education specified that professional development needs to engage educators in collegial and collaborative interactions to achieve mastery in their subject areas, thus helping them to create effective schools.

In this study, the issue at stake was how to make our professional development programs improve teaching practice through increased teacher content knowledge, collegiality and research-based instruction while serving the educational needs of diverse students in today's classrooms. Given the fact that the traditional professional development programs have outlived their usefulness, they no longer achieve what they are purported to accomplish (Robinson, 2003; South Regional Education Board, 1998). There is need to improve the traditional professional development programs for students' success.

Setting and Sample

The site of this study is four charter schools in Jersey City, New Jersey. Jersey City is located approximately three miles west of New York City. It is a large metropolitan city composed of people from different ethnic backgrounds and cultures. Although different cultures and races are represented in the Jersey City schools, the African American students are about 80% of the population of most of the schools. I used a convenient sample of 100 teachers because the total population of the four charter schools is about one hundred teachers. Survey research was chosen because it allowed me to determine the character, the attitude and the behavior of the population through the sample. Again, I preferred to use survey method because it was less expensive and offered a quick turnaround in collecting data. Moreover, I was able to make a general statement about the population based on the information gathered from the sample. The sample size used in this study served as a cross-section of the general population and was representative of the population. Fink (2003) described sample size as the various units (men, women, places, or things) that must be surveyed to make the findings valid. The sample size is directly related to the costs of data collection as it affects data interviews, data processing and analysis. Fink pointed out that increasing sample size may divert the attention of the researcher from following up the qualified subjects whose non-response would affect the sampling error. Babbie (2001) maintained that a sample is representative of the population from which it is drawn if it shares the same

characteristics found in the population. The respondents possess the characteristics relevant to the interest of my study.

Lenth (2001) argued that the size of the study needs to match the goals of the study. He added that for economic reasons, an ill-sized sample can either waste resources without effective results or waste more resources than needed. Following the limited resources available to this researcher, a sample of 100 participants was economically manageable for me, while giving required results.

The participants were current schoolteachers. "Ninety six percent of New Jersey's teachers have already met the No Child Left Behind's (NCLB) Highly Qualified Teacher (HQT) requirement" (Davy, 2006, p.1). The participants are among the highly qualified teachers of New Jersey. They were exposed to many professional development sessions, and were in the position to know the quality of professional developments provided in the school district. Moreover, Jersey City schools claimed they were continuously advancing towards success. In their effort to meet the challenges of the 21st-century global and technological society, they developed new curricula in all content areas and grade levels with strict adherence to New Jersey Core Curriculum Content Standards. Teachers who were continuously conscientious about school improvement and the success of students were better disposed to participate in a study that involved social change.

The sample consisted of 100 teachers. The teachers had varying teaching experiences. For instance, many of the teachers taught for ten or more years, while others taught for three or more years. Each of the participants was certified in his or her content

area and therefore met the eligibility definition of highly qualified teachers. Jersey City schools are constantly providing professional development programs that are designed to align the teachers with the best practice. I assumed the participants know what good practice looked like.

Instrumentation and Material

More often than not, survey research involves asking questions. A researcher aims to determine the degree of participants' attitude or belief about a particular issue by means of brief probing statements (Babbie, 1990). Babbie maintained that using both questions and statements in a given questionnaire makes the design more flexible and interesting. The survey questions were ranked on a 5-point Likert scale, with 0 representing never, 1 seldom, 2 sometimes, 3 frequently, and 4 always. In this ordinal measurement, a score of 4 on the index was assumed to be the highest score and 0 the lowest score.

Survey Instrument

Figure 1 below shows the instrument used to gather data.

This survey will be used for academic purpose only with the intent of using results for the improvement of schools. All responses will remain confidential and when results are discussed, all participants will remain anonymous.
Thank you for participating.

	Never	Seldom	Sometimes	Frequently	Always
Collegiality					
1. At our school, teachers can choose the type of professional development they receive (e.g., study group, action research, observations).	0	1	2	3	4
2. We use several sources to evaluate the effectiveness of our professional development on student learning (e.g., classroom observations, teacher surveys, conversations with principal or coaches).	0	1	2	3	4
3. At our school teacher learning is supported through a combination of strategies (e.g., workshops, peer coaching, study groups, joint planning of lessons, and examination of student work).	0	1	2	3	4
Research Based Teaching					
4. We make decisions about professional development based on research that shows evidence of student performance.	0	1	2	3	4
Content Knowledge					
5. Teachers are provided opportunities to gain deep understanding of the subjects they teach	0	1	2	3	4
6. Teachers receive training on curriculum and instruction for students at different levels of learning.	0	1	2	3	4
Differentiation of Instruction					
7. At our school, we adjust instruction and assessment to meet the needs of diverse learners.	0	1	2	3	4
8. Teachers at our school learn how to use data to assess student's learning needs.	0	1	2	3	4
9. Practical Application of Professional Development in the Classroom					
10. The professional development that I participate in models instructional strategies that I will use in my classroom	0	1	2	3	4
11. We have opportunities to practice new skills gained during staff development.	0	1	2	3	4

Open-ended question:
Please state briefly which type of professional development you took that helped to increase the scores of your students: the traditional lecture method delivered by a hired expert or the one designed by your school which made you work with your peers, provided observation, practice and feedback.

Source: Copied with permission of the National Staff Development Council, www.nsdc.org, All rights reserved.

Figure 1 - Survey Instrument

The National Staff Development Council (NSDC) ensured that its Standards Assessment Inventory instrument met the validity and reliability requirements by partnering with the Southwest Educational Development Laboratory to produce an instrument that was valid and reliable (Hirsh, 2006). The instrument was tested for reliability and was found to be high and consistent in three pilot studies. The experts who were consulted confirmed the instrument's clarity and relevance in each of the standards. Moreover, the criterion-rated validity was commended by the experts who claimed that schools that align their professional development programs with NSDC standards produce comparable rating of their school professional development program with the ratings of experts (Southwest Educational Development Laboratory 2003).   Hirsh maintained that the Division of School Improvement, Professional Learning Services for the state of Georgia continues to use NSDC Standards Assessment Inventory for its statewide Staff Development because it has proven to be valid and reliable.

The prompt about collegiality was designed to find out if teachers' knowledge and experiences were respected, and if teachers were allowed to take charge of their own professional development in collegial groups. The prompt on research-based practice examined the effect of designed professional development with regards to teachers' construction of knowledge through research proven methods in the teachers' respective classrooms. The term *well qualified teacher* translated to in-depth knowledge in one's subject area. The content knowledge prompt was analyzed to determine how well the schools and the district helped teachers to be experts in their content areas. Howard

(2007) equated differentiation of instruction to critical analysis of outcome data and designing new strategies to service students who are not benefiting from current instruction. I utilized the differentiation of instruction prompt to assess how well prepared teachers were in taking care of diverse student educational needs.

Some researchers maintained that what is learned in the traditional professional development is not applied in the classroom (Lieberman & Woods, 2001; Southern Regional Education Board, 1998). I used the prompt on practical application of what is learned in the traditional professional development to assess the extent to which schools benefit from the traditional professional development.

Reliability of Instrument

The reliability and validity of a survey instrument is of great importance. Fink (2003) maintained that a reliable survey instrument is measurement error free and gives consistent results each time it is used without an intervention. Similarly, Babbie (2001) claimed that reliability has to do with the same result each time an instrument is used. In the same token, an unreliable instrument is invalid; hence, inconsistent data cannot produce accurate results. Fink posited that a survey instrument needs to be easy to read, complete and administer. I had permission to use the NSDC instrument that was tested for reliability and was found to be clear and easy to understand by the respondents. See appendix B p.108.

Validity of Instrument

In terms of validity, Fink (2003) claimed that a survey instrument is deemed valid if it measures exactly what it is designed to measure. Fink also argued that an attitude survey will be invalid if the researcher is unable to prove that the respondents have noticeably better attitudes than those classified as not satisfied by means of their responses. The NSDC instrument that I used (with permission) was tested for validity and reliability. Moreover, the instrument's validity and reliability were proved by its users, particularly many school districts in the state of Georgia (Hirsh, 2006). I selected specific written prompts that pertain to this professional development factors from the instrument without modifications or change of environment in which the selected instrument was used. The instrument therefore gave valid results about the measurement of the five key professional development factors: collegiality, research-based practice, development of content knowledge and effective teaching, differentiation of instruction to meet the need of diverse learners and practical application of what was learned in professional development sessions in the classroom.

Completion of instrument by participants: If an instrument has to produce reliable and valid results, the questionnaire must be clear and easy to understand by participants. It is necessary therefore that the researcher gives clear instructions and introductory comments as they apply, whether the questionnaire is self-administered or by an interviewer (Babbie, 1990). I assumed that the respondents were well-educated teachers, who were familiar with normal survey techniques. Still, I gave them directives. The

respondents were instructed to respond to the questions as they applied to their respective

schools and professional experiences. They were assured that the survey was for

academic work geared toward the improvement of schools. Similarly, they were

informed that all responses were very confidential and would not be reported in a way

that the respondent can be identified.

In the different subsections, I gave a short introductory statement, which gave the

respondents an idea of what I was looking for. For example:

1. Collegiality: We would want to know how much collaborative work takes

    place in your school.

2. Research-based teaching: Following the importance of research-based

    teaching, we want to have an idea of how your school prepares you for

    teaching with the concept of what works in the classroom.

3. Content knowledge: Bearing in mind that teachers love to teach what they

    have adequate knowledge about, we want to know how your school helps you

    to be an expert in your subject area.

4. Differentiation of instruction: It is important that the diverse learning styles of

    students in our classroom benefit from the instruction. We want to know how

    your school supports you to take care of auditory, visual, tactile, kinesthetic,

    global and analytic learners in your class.

5. Practical application of knowledge gained from traditional professional

    development: The importance of professional development is to help improve

the quality of teaching in the classroom. We want to know to what extent you

apply what you learned in the traditional professional development in the

classroom, particularly when the professional development may not be

perceived as relevant to what you teach.

The independent variables in this study therefore were collegiality, research based

teaching, content knowledge, differentiation of instruction, and practical application of

knowledge gained from traditional professional development. The dependent variables

were school improvement and student achievement.

Table 1

Prompts

Item Number Collegiality	Actual Statement	Possible Responses
1	At our school, teachers can choose the type of professional development they receive (e.g. study group, action research, observation).	0 Never; 1 Seldom; 2 Sometimes; 3 Frequently; 4 Always
2	We use several sources to evaluate the effectiveness of our professional development on student learning (e.g., classroom observations, teacher surveys, and conversations, conversations with principal or coaches).	0 Never; 1 Seldom; 2 Sometimes; 3 Frequently; 4 Always
3	At our school teacher learning is supported through a combination of strategies (e.g., workshops, peer coaching, study group, joint planning of lessons, and examination of student work).	0 Never; 1 Seldom; 2 Sometimes; 3 Frequently; 4 Always
Research Based Teaching		
4	We make decisions about professional development based on research that shows evidence of student performance.	0 Never; 1 Seldom; 2 Sometimes; 3 Frequently; 4 Always
Content Knowledge		
5	Teachers are provided opportunities to gain deep understanding of the subjects of learning.	0 Never; 1 Seldom; 2 Sometimes; 3 Frequently; 4 Always
6	Teachers receive training on curriculum and instruction for students at different levels of learning. Differentiation of Instruction	0 Never; 1 Seldom; 2 Sometimes; 3 Frequently; 4 Always
7	At our school, we adjust instruction and assessment to meet the needs of diverse learners.	0 = Never; 1= Seldom; 2= Sometimes; 3 = Frequently; 4 = Always
8	Teachers at our school learn how to use data to assess students' learning needs.	0 = Never; 1= Seldom; 2= Sometimes; 3 = Frequently; 4 = Always
Practical Application of Professional Development in Classroom		
9	The professional development that I participate in models instructional strategies that I will use in my classroom	0 = Never; 1= Seldom; 2= Sometimes; 3 = Frequently; 4 = Always
Item Number	Actual Statement	Possible Responses
10	We have opportunities to practice new skills gained during staff development.	0 = Never; 1= Seldom; 2= Sometimes; 3 = Frequently; 4 = Always

Data Collection

I was permitted to conduct this study in four charter schools in Jersey City. In order to maintain the anonymity of participants, both the consent letters and questionnaires were packaged and dropped off in-person to the four schools by me. The principal of each school had the letters of consent and surveys put in each respondent's letter box. The consent letter explained the purpose of the study, the confidentiality of reporting of data collected and the voluntary nature of participation in the survey. Again, it was made explicit that signing the consent form and returning to the researcher was not required, since completion of the survey indicated consent.

The participants were instructed to complete the survey and drop them in a secure box provided in the mailroom. Each participant was given a timeframe of 1 week to return the survey. Within the specified time, all the 100 respondents returned their questionnaires

Data Analysis

The data were analyzed by using the Statistical Program for the Social Sciences (SPSS). The information entered into the SPSS was coded as shown:

Teacher ID: 1-100

Collegiality: C1, C2, C 3

Research Based Teaching: R4

Content Knowledge: K5, K6

Differentiation of Instruction: I 7, I 8

Practical Application of Professional Development: P 9, P 10

Professional Development: PD

Designed by the School: 3

Traditional Lecture: 4

Both: 2

No answer: 0

Never: 0

Seldom: 1

Sometimes: 2

Frequently: 3

Always: 4

I used the *t* statistic to give a descriptive analysis of data for all dependent and independent variables in the study. The means, standard deviations, measures of central tendency, frequencies, percentages of scores of variables were used to analyze the data (Creswell, 2003). The *t* statistic was used because it helps researchers test hypotheses when the population mean - μ is unknown and the value of σ is also unknown (Gravetter & Wallnau, 2005). Moreover, the *t* statistic assumed that all observations do not relate to each other and can be used only once. There is also a normal distribution of the sampled population. I needed only one unknown population, a sample, and a logical hypothesis to compute the data (Gravetter & Wallnau, 2005). Again, I did not base the hypothesis on actual population mean before the survey. At the same time, for each *t*-statistic I used

Levene's test of equal variance to determine if the variances were equal across the different groups.

I tested the major questions or hypotheses in the study to examine any correlations. For example:

The null hypothesis (*Ho*) stated that collegial professional development was not more likely to improve schools than the traditional professional development.

The alternative hypothesis *(Hi)* stated that the collegial professional development was more likely to improve schools than the traditional professional development.

Measures Taken for the Protection of Participants' Rights

The American Association for Public Opinion Research (2005) argued that participation in surveys does not put respondents at more risk than the minimal risks of everyday life, which was the reason why federal regulations handle surveys with a less strict review process. The American Association for Public Opinion research argued further that documentation of consent is not required in surveys because it may hamper participation. Nevertheless, in all studies using a survey, the consent requirement can be satisfied by a brief introductory statement in a telephone interview or a cover letter in a self-administered survey. I told the participants the academic purpose of the survey and the intent to use its result for the improvement of schools. Participants were assured of the confidentiality of all responses, and they were assured of their anonymity during discussion of results. They were told each participating school will be given at least two copies of the results of the study.

I am a special education teacher in one of the schools in Jersey City, New Jersey. The school where I teach is a small school with 35 teachers on the staff. Since this school has fewer teachers than the sample I needed to carry out the study, I chose to use teachers in four charter schools in Jersey City.

I was responsible for data collection. However, I worked with the cooperation of the school administrators in each of the sites. For instance the principals of the sites distributed the surveys to the teachers. Creswell (2003) stressed the importance of gaining the permission of individuals in authority to allow access to study participants at the research sites.

Although I am a teacher in one of the participating schools, I had no authority over the respondents. It follows that evidence of coercion during respondent recruitment was not feasible. Again, my past or present relationship with the respondents had no adverse effect on data collection.

SECTION 4

RESULTS OF THE STUDY

Introduction

The purpose of this study was to find out if collegial professional development facilitated the academic improvement of schools in Jersey City Schools more than traditional professional development. Traditional professional development was criticized for not enhancing actual classroom changes (Lieberman & Woods, 2001; Southern Regional Education Board, 1998). This study sought to answer the question: if teachers can take charge of their own development, practice in their classrooms with their peers, and develop cordial and trusting relationships, can these factors translate into school improvement? The main research questions were:

1. Considering the fact that teachers are the central focus of recent Education Acts, in the opinion of the teachers surveyed, does professional development help teachers improve schools?

2. In the opinion of the teachers surveyed, does support from management encourage collegial activities?

3. In the opinion of the teachers surveyed, does collegiality help improve schools?

4. In the opinion of the teachers surveyed, do teachers apply what is learned in traditional professional development in their classrooms?

Descriptive Statistics

A total of 100 surveys were sent out to teachers. All the surveys were returned,

thus giving a 100% return rate. The Likert-type questions are summarized in table 2

where if *n* was less than 100, it indicated all the teachers did not respond to the question.

There were 10 questions asked and each is detailed in the following paragraphs.

Table 2

Distribution of Responses

	N	Minimum	Maximum	Mean	Std. Deviation
Collegiality 1	100	0	4	2.34	1.007
Collegiality 2	100	0	4	2.76	1.074
Collegiality 3	100	0	4	3.08	.950
Research	99	0	4	2.73	.890
Content Knowledge 1	99	1	4	2.86	.892
Content Knowledge 2	95	1	4	2.63	.923
Diff. Instruction 1	99	1	4	3.12	.786
Diff. Instruction 2	100	1	4	2.95	.757
Practical Application 1	99	0	4	3.01	.827
Practical Application 2	98	1	4	3.00	.849
Valid N (listwise)	90				

The open-ended question asked teachers which professional development helped

to increase the scores of their students - the traditional lecture method or the one planned

by their school. The frequencies of their answers are summarized in Table 3.

Table 3:

Frequency of Response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No Answer	32	32.0	32.0	32.0
	Both	11	11.0	11.0	43.0
	Designed by School	36	36.0	36.0	79.0
	Traditional Lecture	21	21.0	21.0	100.0
	Total	100	100.0	100.0	

Thirty-two teachers did not respond to the open-ended questions. Eleven teachers

felt that both types of professional development helped to increase the scores of their

students (the one designed by their school and the traditional lecture method delivered by

a hired expert). Thirty-six teachers claimed the professional development designed by

their school, which made them work with their peers, provided observation and practice,

and feedback helped to increase the scores of their students. On the other hand, 21

teachers maintained that traditional lecture method delivered by a hired expert helped to

improve their students' scores.

Survey Instrument

This study was aimed at how to make our professional development programs

enhance teaching practice through increase of teachers' content knowledge, collegiality,

research-based instruction, differentiation of instruction and practical application.

Consequently, ten prompts were composed to find out how much of these variables existed in the schools surveyed. In order to get more meaningful interpretation, the variables were placed in the following dimensions:

1. Content knowledge: how much opportunity teachers have to gain in-depth knowledge of the subjects they teach, including curriculum and instruction for the learners at the different levels.

2. Collegiality: how much opportunity teachers have to choose the professional development they receive, the availability of several sources to evaluate professional development, and support given to teachers' learning through different strategies.

3. Research based teaching: whether decisions about professional development are based on research proven evidence of student performance.

4. Differentiation of instruction: whether instruction and assessment are adjusted to meet the needs of diverse learners, and how to use data to assess student learning.

5. Practical applications of professional development in the classroom: whether professional development provided by the school models instructional strategies

to be used in the classroom, and provides the opportunity to practice new skills

during professional development.

Table 4 shows the frequency distribution of the responses on collegiality question 1.

Table 4

Frequency Distribution for Question 1 on Collegiality 1

		Frequency	Percent	Valid Percent	Cumulative Percent (N=100)
Valid	Never	2	2.0	2.0	2.0
	Seldom	19	19.0	19.0	21.0
	Sometimes	36	36.0	36.0	57.0
	Frequently	29	29.0	29.0	86.0
	Always	14	14.0	14.0	100.0
	Total	100	100.0	100.0	

Note. Question #1. Collegiality: At our school, teachers can choose the type of professional development they receive (e.g., study group, action research, observations).

For the purpose of understanding and comparing the scores for each question, 0

represented *Never*, 1 *Seldom*, 2 *Sometimes*, 3 *Frequently*, and 4 *Always*. A score of 4 is

the highest score and a score of 3 is higher than a score of 2 and so on. In this table,

Sometimes had a high score of 36 followed by Frequently which had a score of 29. The

score for 4 (Always) suggested that allowing teachers in these schools to choose the type

of professional development they receive was not a normal practice.

Table 5 outlines the frequencies of the second question on collegiality.

Table 5.

Frequency Distribution for Question 2 on Collegiality 2

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Never	3	3.0	3.0	3.0
Seldom	10	10.0	10.0	13.0
Sometimes	24	24.0	24.0	37.0
Frequently	34	34.0	34.0	71.0
Always	29	29.0	29.0	100.0
Total	100	100.0	100.0	

Note. *Question #2. Collegiality: We use several sources to evaluate the effectiveness of our professional development on student learning (e.g., classroom observations, teacher surveys, conversations with principal or coaches).*

In Table 5, the scores for Frequently and Always are the highest, thus suggesting that a good amount of collegial activities existed in these schools. The scores in Table 6 amplify those in Table 5 with regard to the amount of collegial interactions prevalent in the schools surveyed. The combined results for Frequently in both Tables 5 and 6 total up to 67% while the scores for Always in both Tables total to 70%.

Table 6.

Frequency Distribution for Question 3 on Collegiality 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1.0	1.0	1.0
	Seldom	5	5.0	5.0	6.0
	Sometimes	20	20.0	20.0	26.0
	Frequently	33	33.0	33.0	59.0
	Always	41	41.0	41.0	100.0
	Total	100	100.0	100.0	

Note. *Question #3. Collegiality: At our school teacher learning is supported through a combination of strategies (e.g., workshops, peer coaching, study groups, joint planning of lessons, and examination of student work).*

Again, as shown in the table, Always and Frequently have the highest scores. The

score of 41% for Always indicated a high level of collaborative work in the schools

surveyed. The 1% score for Never and 6 % score for Seldom are low scores that showed

how much value the schools surveyed placed on collegiality. The high frequency scores

for collegiality in questions 1 through 3 were evidence that teacher learning was

approached collegially. It also suggested that teacher learning was supported through a

combination of collegial strategies (workshops, peer coaching, study groups, joint

planning of lessons, and examination of student work) in these schools.

Table 7 mirrored the extent to which the teachers believed research-based

teaching engendered high-scores by students.

Table 7:

Frequency Distribution for Question 4 on Research-Based Question

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1.0	1.0	1.0
	Seldom	8	8.0	8.1	9.1
	Sometimes	26	26.0	26.3	35.4
	Frequently	46	46.0	46.5	81.8
	Always	18	18.0	18.2	100.0
	Total	99	99.0	100.0	
Missing	System	1	1.0		
	Total	100	100.0		

Note. *Question #4. Research-based Teaching: We make decisions about professional development based on research that shows evidence of student performance.*

Although Table 7 shows a frequency score of 18% for Always, and a 26% score for Sometimes, a 46% score for Frequently which was a total score of 64% for Frequently and Always, thus suggesting that the teachers were of the opinion that professional development helped teachers to improve schools. It suggested also that the teachers apply research-based methods that work in the classroom; hence they based decisions about professional development on research that showed evidence of student performance.

Table 8:

Frequency Distribution for Question 5 on Content Knowledge 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Seldom	6	6.0	6.1	6.1
	Sometimes	29	29.0	29.3	35.4
	Frequently	37	37.0	37.4	72.7
	Always	27	27.0	27.3	100.0
	Total	99	99.0	100.0	
Missing	System	1	1.0		
Total		100	100.0		

Note. *Question #5. Content Knowledge: Teachers are provided opportunities to gain deep understanding of the subjects they teach.*

The table showed that there was no score for Never and a low score of 6% for

Seldom suggests that there was a considerable amount of support from management for

the teachers at these schools in terms of training for deeper understanding of their content

areas.

Table 9:

Frequency Distribution for Question 6 on Content Knowledge 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Seldom	12	12.0	12.6	12.6
	Sometimes	28	28.0	29.5	42.1
	Frequently	38	38.0	40.0	82.1
	Always	17	17.0	17.9	100.0
	Total	95	95.0	100.0	
Missing	System	5	5.0		
Total		100	100.0		

Note. *Question #6 Content Knowledge: Teachers receive training on curriculum and instruction for students at different levels of learning.*

Again as the table showed, there was no score for Never, but the score for Seldom

doubled what it was for question # 5. On the other hand, the score for Always decreased

by about 63% of its score in question # 5. As many as five respondents did not answer

question #6, either because they did not feel they receive enough help on curriculum and

instruction, or they did not want to offend anybody even though the survey was

anonymous. Nonetheless, a score of 38% for Frequently and 17% for Always suggested

that the schools surveyed supported the teachers, and at the same time placed much value

on professional development for school improvement.

Table 10:

Frequency Distribution for Question 7 on Diff. Instruction 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Seldom	2	2.0	2.0	2.0
	Sometimes	19	19.0	19.2	21.2
	Frequently	43	43.0	43.4	64.6
	Always	35	35.0	35.4	100.0
	Total	99	99.0	100.0	
Missing	System	1	1.0		
Total		100	100.0		

Note. *Question #7. Differentiation of Instruction: At our school, we adjust instruction and assessment to meet the needs of diverse learners.*

This table showed that there was no score for Never and a very low score of 2% for Seldom. Frequently and Always have high scores of 43% and 35% respectively, that is 78% when combined. It implied that professional development was helping these teachers to differentiate instruction, which will eventually translate to school improvement.

Table 11 shows how much professional development helps the teachers surveyed to use data in improvement of student learning.

Table 11:

Frequency Distribution for Question 8 on Diff. Instruction 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Seldom	2	2.0	2.0	2.0
	Sometimes	25	25.0	25.0	27.0
	Frequently	49	49.0	49.0	76.0
	Always	24	24.0	24.0	100.0
	Total	100	100.0	100.0	

Note. *Question #8: Differentiation of Instruction: Teachers at our school learn how to use data to assess student learning needs.*

This table showed that there were no responses for Never, while Seldom had a

very low score of 2%. Sometimes had a score of 25%. Always had a score of 24%,

Frequently had a very high score of 49%, together totaling 73%; thus suggesting that the

schools provided considerable amount of professional development to help teachers

improve the scores of their students.

One can see the figures for practical application of professional development in

the classroom in Table 12.

Table 12:

Frequency Distribution for Question 9 on Practical Application 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1.0	1.0	1.0
	Seldom	2	2.0	2.0	3.0
	Sometimes	21	21.0	21.2	24.2
	Frequently	46	46.0	46.5	70.7
	Always	29	29.0	29.3	100.0
	Total	99	99.0	100.0	
Missing	System	1	1.0		
Total		100	100.0		

Note. *Question #9. Practical Application of Professional Development in the Classroom: The professional development I participate in models instructional*
strategies that I will use in my classroom.

In this table, Never and Seldom had very low scores of 1% and 2%. Sometimes

had moderately high score of 21%, while Frequently and Always had high scores of 46%

and 29% respectively, 75% combined; thus, demonstrating that the professional

development sessions provided for these teachers enhanced their practical application of

what they learned for school improvement.

Table 13 displays the frequency and percent scores of the different variables.

Table 13:

Frequency Distribution for Question 10 on Practical Application 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Seldom	5	5.0	5.1	5.1
	Sometimes	20	20.0	20.4	25.5
	Frequently	43	43.0	43.9	69.4
	Always	30	30.0	30.6	100.0
	Total	98	98.0	100.0	
Missing	System	2	2.0		
Total		100	100.0		

Note. *Question #10: Practical application of professional development in the classroom: We have opportunities to practice new skills gained during staff development.*

Table 13 showed no score for Never and a low score of 5% for Seldom. Sometimes had a moderately high score of 20%. Frequently and Always have very high scores of 43% and 30%, respectively. It could be inferred that the professional development these schools offered to their teachers, whether they were collegial or traditional lecture methods, prepared them to apply the knowledge gained from professional development in their classrooms. Table 14 shows research hypothesis results.

Results of Hypothesis Testing

A hypothesis was stated to examine the important aspect of the research questions

of this study:

The null hypothesis (H_o) stated that collegial professional development was not more

likely to improve schools than the traditional professional development. Conversely, the

alternative hypothesis (H_1) stated that collegial professional development was more likely

to improve schools than the traditional professional development.

In order to test the hypothesis, teachers were asked to state which professional

development method they participated in helped to increase the scores of their students:

the traditional lecture method (method by a hired outside expert) or the *one designed by*

their school (the one that made them work with their peers, provided observation,

practice, and feedback). To examine the scores for the traditional lecture method and the

method planned by the school, a *t* test was utilized. Levene's test of equal variances was

conducted to determine if the assumption of the *t* test was met α = .05. The significance

was .625. The p value was > .05 with equal variance assumed. Then the *t* value (which

was 2.109) was used. p was still not ≤ .05 so we accept the null hypothesis. See Table 14.

Table 14:

Results of Hypothesis Testing

		Levene's Test for Equality of Variances		*t* test for Equality of Means			
		F	*Sig.*	*t*	*df*		Mean Difference
Collegiality 1	Equal variances assumed	.240	.626	2.109	55	.039	.560
	Equal variances not assumed			2.161	45.131	.036	.560
Collegiality 2	Equal variances assumed	.597	.443	1.056	55	.296	.341
	Equal variances not assumed			1.016	37.244	.316	.341
Collegiality 3	Equal variances assumed	.087	.769	2.402	55	.020	.643
	Equal variances not assumed			2.345	38.930	.024	.643
Research	Equal variances assumed	.707	.404	2.212	54	.031	.552
	Equal variances not assumed			2.152	38.677	.038	.552
Content Knowledge 1	Equal variances assumed	1.462	.232	.070	55	.945	.016
	Equal variances not assumed			.072	46.124	.943	.016
Content Knowledge 2	Equal variances assumed	1.827	.182	.174	52	.863	.039
	Equal variances not assumed			.184	49.699	.855	.039
Diff. Instruction 1	Equal variances assumed	4.520	.038	.124	54	.902	.028
	Equal variances not assumed			.135	49.500	.893	.028
Diff. Instruction 2	Equal variances assumed	2.733	.104	.470	55	.641	.107
	Equal variances not assumed			.447	35.961	.658	.107
Practical Application 1	Equal variances assumed	.071	.791	1.371	54	.176	.314
	Equal variances not assumed			1.402	45.280	.168	.314
Practical Application 2	Equal variances assumed	.053	.819	-.732	53	.467	-.171
	Equal variances not assumed			-.723	38.257	.474	-.171

Table 15

Research Hypothesis Results

Professional Development		N	Mean	Std. Deviation	t	df	Sig .(2 tailed)
Collegiality 1	Designed by School	36	2.42	.996	2.109.	55	.039
	Traditional Lecture	21	1.86	.910	2.161	45.131	.036
Collegiality 2	Designed by School	36	2.72	1.111	1.056	55	.296
	Traditional Lecture	21	2.38	1.284	1.016.	37.244	.316
Collegiality 3	Designed by School	36	3.17	.941	2.402.	55	.020
	Traditional Lecture	21	2.52	1.030	2.345.	38.930	.024
Research	Designed by School	35	2.89	.867	2.212.	54	.031
	Traditional Lecture	21	2.33	.966	.2.152	38.677	.038
Content Knowledge 1	Designed by School	36	2.78	.866	..070	55	.945
	Traditional Lecture	21	2.76	.768	.072	46.124	.943
Content Knowledge 2	Designed by School	33	2.52	.870	.174	52	.863
	Traditional Lecture	21	2.48	.680	.184	49.699	.855
Diff. Instruction 1	Designed by School	36	3.03	.878	.124	54	.902
	Traditional Lecture	20	3.00	.649	.135	49.500	.893
Diff. Instruction 2	Designed by School	36	2.92	.770	.470	55	.641
	Traditional Lecture	21	2.81	.928	.447	35.961	.658
Practical Application 1	Designed by School	35	3.03	.857	1.371	54	.176
	Traditional Lecture	21	2.71	.784	1.402	45.280	.168
Practical Application 2	Designed by School	35	2.83	.822	-.732	53	.467
	Traditional Lecture	20	3.00	.858	-.723	38.257	.474

For further analysis, the average response for "Designed by the School" and "Traditional Lecture Method" in each question was compared:

- Collegiality 1: $p < .05$ two tailed.

- Collegiality 2: The comparison showed the scores were not significant, $p > .05$ two tailed.

- Collegiality 3: The variability was significant, $p < .05$ two tailed.

- Research Based Teaching: The variability was significant, $p < .05$ two tailed.

- Content Knowledge 1: The variability was not significant, $p > .05$ two tailed.

- Content Knowledge 2: The variability was not significant, $p > .05$ two tailed.

- Differentiation of Instruction questions 1 & 2: The variability was not significant, $p > .05$ two tailed.

- Practical Application 1& 2: The variability was not significant. $p > .05$ two tailed.

    The significant variability of collegiality 1 and 3, and research-based teaching ($p < .05$ two tailed) strongly indicates that the teachers surveyed believe that collegial professional development enhances the improvement of schools.

Summary of Findings

Out of the one hundred teachers who were surveyed, 32 of them did not respond to the open-ended question that was asked in order to test the hypothesis. The low response affected the overall result of the hypothesis test. However, 36 teachers said the school-designed professional development program (collegial professional development) helped to increase the scores of their students, while only 21 teachers said the traditional lecture method by a hired expert helped their students. Eleven respondents said both methods of professional development enhanced the scores of their students. Since the majority of the respondents said the school-planned professional development program (the collegial type) helped to improve the scores of their students, it suggested that the collegial professional development was more likely to help school improvement than the traditional professional development method. Furthermore, if the 36 who said collegial professional development increased the scores of their students were included with the 11 who said both enhanced student scores, then it could be said that 69% of those responding felt that collegiality was beneficial to some extent while only 31% of those responding felt that only the traditional method was beneficial; a ratio of a little better than 2 to 1 of those responding favoring or comfortable with collegial professional development.

For collegiality questions 1 to 3, the results of the teachers' responses indicated that the teachers in these schools needed more freedom to choose the type of professional development they receive. However, there was evidence of elaborate collegial and

collaborative work in these schools. Again, their responses suggested that these schools believed that when the entire stakeholders of the school worked with a common purpose, and teacher learning was supported in a variety of ways, the teachers' pedagogical skills improved.

A very high score of 46% for Frequently in the "Research-Based Teaching" question implied that the teachers surveyed believed that research-based teaching had a positive effect on student performance, hence they based their professional development on research proven evidence of successful practice.

The response to the content knowledge questions suggested that these teachers felt that good teachers' content knowledge translated to school improvement. Also, there was evidence of a culture and vision that supported professional development for school improvement. The teachers' responses to the differentiation questions indicated that the teachers surveyed placed high value on teaching students according to their individual learning needs. Still, their responses suggested they were provided professional development sessions that helped them to differentiate instruction. The teachers' responses implied that they used research to determine the learning needs of their students thereby improving their scores.

The response to the practical application of knowledge gained from professional development sessions in the classroom implied that the teachers surveyed had practical application of what they learned from professional development sessions in their classrooms, whether it was traditional or collegial in nature. Since the result of the study suggested that the teachers surveyed worked collaboratively, it was not doubtful that collegial activities helped them to put the knowledge gained from professional development sessions into actual classroom practice.

Although a greater number of the teachers surveyed said collegial professional development helped them increase their students' scores, some of the teachers said both the traditional and collegial methods helped them as well. It could be inferred that the schools were adopting a blend of both methods for school improvement.

SECTION 5

RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

Section 5 contains an overview of the study, which includes the types of literature reviewed, the research problem, the research questions, and methodology. It also provides a brief summary of the findings, including a discussion of the results of the study and suggestions for further study.

Summary of Research Study

The driving force for school reform today is to enable American students to fit into the competitive world economy (Stolp, 1994; No Child Left Behind, 2004), and to give every student a fair chance to succeed. Stolp maintained that educators are alarmed by reports from universities that applicants lack the basic skills needed for advanced studies. Consequently, something must be done to prepare the future workforce more adequately.

Neville and Robinson (2003) posited that many researchers, policy makers, and educators view professional development as a positive tool for improving student achievement and an important approach for increasing teachers' content knowledge and teaching. However, some teachers complain that the district and the principals make them participate in professional development sessions that do not relate to what they teach. Although some professional development activities can be of great importance, others provide knowledge that is not useful in the actual classroom practice. The

Southern Regional Education Board (1998) maintained that the traditional professional development does not make provision for observation, practice or feedback. Again, some researchers argue that what is learned in professional development sessions is not implemented in the classroom.

The purpose of this study was to find out if collegial professional development facilitates the academic improvement of schools in Jersey City more than the traditional professional development method, based on opinion of the teachers surveyed. This study sought to answer the question: if teachers can take charge of their own development, practice in their classrooms with their peers, and develop cordial and trusting relationships, can these factors translate into school improvement? Moreover, when teachers work collaboratively, can they cope better with the challenges that the present day teaching poses?

Since it was a normal practice for teachers to participate in many professional development sessions during the school year, they were asked to state which professional development helped to improve their student's scores - the traditional lecture method or the one planned by their school that made them work with their peers, provided observation, practice, and feedback. The scores of their answers for "Traditional Lecture Method" and "Planned by the School" were examined and a t test was used to analyze the results. It was found that the assumption of the t test was not met, $\alpha = .05$. The significance was .625. The p value was > .05 with equal variance assumed.

Interpretation of Findings

In order to test the hypothesis, an open ended question was asked. Only 32 out of the 100 teachers surveyed responded to the open-ended question. The low response affected the overall result of the test, thus causing the null Hypothesis (*Ho*) not to be rejected. This result was not consistent with the assumptions of present literature about the effectiveness of collegial professional development. Again, 36 respondents indicated the collegial professional development enhanced the scores of their students. On the other hand, only 21 teachers said the traditional lecture method by a hired expert helped to increase the scores of their students. Moreover, 11 respondents were of the opinion that both methods of professional development helped to increase the achievement of their students. Since the majority of respondents said the collegial type of professional development helped their students, it implied that the collegial professional development has a greater possibility to improve student achievement than the traditional lecture method.

When an analysis of the average responses for "Designed by the school" and "Traditional lecture method" were compared in each question, the results were statistically significant in collegiality questions 1 and 3 and thus consistent with the assumptions of Hargreaves (2003), who posited that teachers can no longer work and learn in isolation in this fast changing society. Hargreaves continued to argue that teachers need to become experts in their profession by means of constant collective

inquiry and problem solving in collegial teams. The result for collegiality question 2 was not statistically significant. It suggested that the teachers did not use classroom observations, teacher surveys, and conversations with the principal or coaches to evaluate the effectiveness of their professional development on student learning.

The variability for the question on research based teaching was statistically significant. The result was consistent to one of the principles of the US Department of Education which stipulated that an effective professional development must promote continuous inquiry and improvement (Kronley & Handley, 2001). Again, the statistical significance suggested that the teachers surveyed based their decisions about professional development on research that showed evidence of student success. The questions on content knowledge 1and 2, and differentiation of instruction 1and 2 were not statistically significant. The result suggested that the teachers were not given adequate support and preparation in those areas.

In all the Likert-type questions, the frequency of scores for "Sometimes," "Frequently," and "Always" were the highest. While the scores for "Never" and "Seldom" were the lowest. In some cases there was no score for "Never". It strongly suggested that the teachers surveyed were of the opinion that the collegial professional development was more likely to improve student performance than the traditional professional development.

Implications for Social Change

Henderson (1976) saw education as an integral part of the social structure that impacts our political life, religious and family institutions. In effect, education is looked upon to provide leadership for social change. In the same vein, within the framework of this study, I feel that the competitiveness of our workforce in the global economy can be made indomitable through a strong-educational foundation given to the students in our schools today. Again, with teachers as the hub that propels the education of our students, their skills need to be continually updated through effective professional development. It is apparent that teachers love to teach what they know, while students love to learn when learning is fun. As soon as students are happy to be in school because of what they have to learn, one observes obvious change in their grades, which in turn gives rise to students' abilities and thereby social change.

Conclusion

In concluding my findings in this research study, it could be said that although we failed to reject the null Hypothesis (H_o) in the Hypothesis test, there was enough evidence to believe that the collegial professional development method was more likely to improve schools than the traditional professional development method; that is, the number of teachers who said that collegial professional development helped their students to increase their scores was greater than those who said the traditional lecture method by a hired expert helped their students. It was likely that the low response in the open-ended question (32 teachers did not respond to the open-ended question), affected

the *t* test so much that the null hypothesis (H_o) could not be rejected. Nevertheless, their responses in the Likert-type questions were in the higher range of scores (they had high frequencies), suggesting that the teachers surveyed were provided professional development sessions that prepared them well in the areas surveyed.

In all the questions on the Likert-type scale, the frequencies of answers for Never and Seldom had the lowest scores and in some cases there was no score of Never; thus, showing that the teachers believed that professional development leads to the improvement of schools. Furthermore, the scores for Frequently and Always were considerably high in the three questions on Collegiality, except in Collegiality question number 1 where the score for Always was low. Invariably, the high scores in the Collegiality questions were congruent with management support through a combination of strategies, provision of opportunities for teacher learning, and collaborative work prevalent in schools with a culture of teamwork for school improvement.

Some of the teachers said they have a hired expert (consultant who comes to the school often) who combines the lecture method with demonstration in the classroom, observation and feedback. This might be the reason why those teachers said both the traditional and collegial professional development helped their students. Overall, the scores for application of professional development in the classroom were high for both those who said that collegial professional development helped their students and those who said the traditional type helped them.

It appears that literature for improvement in the traditional lecture method is succeeding. There is much hope that, in the future, professional development will accomplish what it is purported to do.

Implications for Action

Since there was no difference found between collegial professional development and the traditional professional development as shown by the *t*-test result, there needs to be a closer look at what caused this type of congruency. Although there was a low response to the open-ended question, some teachers said both the traditional and the collegial types of professional development helped their students. Neville and Robinson (2003) argued that other researchers, policy makers, and educators regard the quality of professional development around the nation as worthless. The Southern Regional Education Board (1998) maintained that traditional professional development does not make provision for observation, practice, or feedback. At the same time, other researchers argued that what is learned in the professional development sessions is not put into practice in the classroom. One can see that the dividing line between the traditional and collegial professional development is practical applicability in the classroom. If the traditional professional development is now adopting the method of practical application in the classroom as indicated by some teachers, it means that the dividing line between both kinds of professional development is fading.

According to Lieberman and Woods (2001), the importance of professional development is to equip teachers adequately in their important job of changing the society through their students. It is important that principals and the school district make sure that their professional development sessions, whether traditional or collegial, involve teachers in constant collective inquiry and application in the classroom.

Principals can consider allowing their teachers to learn to teach well by observing good teaching. Flexible teacher schedules can be prepared to give them the chance to observe good teaching in their peers' classrooms. Again, new teachers can be assigned to mentors who can help to induct them into the mainstream of teaching. When professional development assumes both formal and informal approaches, which make use of practical application of learning to the classroom, there is no doubt professional development will lead to school improvement.

Recommendations for Further Research Studies

In this study, collegiality has an important part to play in attaining the standard of professional development that results in school improvement. The findings of this study suggest that many schools do not often allow the teachers to choose the type of professional development they receive. Neither do they have study groups, action research or observations. It is the teachers who know the areas where they need more in-depth knowledge, therefore, the professional development approach of each school should be based on the needs assessment of the teachers. If teachers fail to make decisions based on research, it will cause them their school improvement and student achievement. Johnson (2000) posited that effective educators make effective decisions based on accurate information. Again, Jenks School District, which is situated south of Tulsa, Oklahoma, attributed its success in school improvement to research-based decision making.

Again, the results of the study suggest that teachers do not always make decisions about professional development based on research that shows evidence of student performance. Such non-research based decisions will not enhance school improvement. Professional development sessions need not be held to fulfill the state requirement, but rather for actual results in the classroom.

As many as 32 teachers out of one hundred respondents did not answer the open-ended question, which sought to find out which method of professional development (the traditional lecture method or the one planned by the respondents' school) helped to increase the scores of students. Although it is ethical for respondents not to answer any question they choose, when many questions are not answered or a lone open-ended question is not answered, as was the case in this study, the overall result of the study is affected. It becomes necessary to avoid open-ended questions in a study of this nature if it is possible. Alternatively, respondents can be prompted to circle the statements of their choice or to circle "agree" or "disagree," In that way the researcher can have a high percentage of responses that improve the outcome of the study.

Following the results of this study, another study which might involve teachers and administrators, could address why many schools hire outside experts for their professional development instead of using the inside experts. It is the inside experts such as the teacher leaders and administrators who understand the needs of the individual teachers and can follow up after each professional development session.

Considering the scope and limitations of this study, a repeat study that would make use of a bigger population to include all the teachers in New Jersey would provide all the stakeholders of the schools in the entire state information about the most effective method of professional development for school improvement. No doubt a study with a bigger population and sample will be more reliable.

Moving Beyond Data

The continuously diversifying school communities and the competitive world economy combine to make the teaching profession more and more challenging. When one looks beyond the theoretical framework of this study that focused on professional development, one can see that accountability on the part of teachers is becoming very stringent and rife. In other words, teachers' job performance affects their professionalism, which is one of the most influencing attributes of education today. Done well, it also enhances the ability of students to learn effectively while affecting teacher retention and the possibility for teachers to develop their teaching skills. In order for teachers to meet the challenges of their high demanding job, it is necessary that the state, the school districts, and the schools collaboratively help teachers to be confident in their content areas and experts in their field through professional development.

Summary

The responses of teachers to the open-ended question revealed that the majority of the teachers surveyed felt that the collegial professional development approach helped

their students increase their scores more than the traditional lecture method by an outside expert did. The average response for "Designed by the School" and "Traditional Lecture Method" (open-ended question) in each question was compared. For collegiality, questions 1 and 3 were significant, while the result for collegiality question 2 was not significant. The research-based question was significant, while no other questions were significant. The scores for each question on the Likert-type scale were high. Therefore, this suggested that the variables were present in their schools and that professional development helps in the improvement of schools. Overall, it could be inferred that the schools surveyed understood the importance of professional development and were of the opinion that collegial professional development helps in the improvement of schools.

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APPENDIX A

PERMISSION LETTER TO USE COPYRIGHTED MATERIAL

July 18, 2008
Davidson Okere
177 Virginia Ave
Jersey City, N.J 07304

National Staff Development Council
504 S. Locust Street
Oxford, OH 45056
                    Re: Application to use copyrighted document.

My name is Davidson Okere, a Walden University EdD student. Please permit me to use your survey instrument titled "Standards Assessment Inventory (SAI)" as the source for my doctoral study survey questions.

Sincerely,

Davidson Okere

APPENDIX B

PERMISSION FOR COPYRIGHTED MATERIAL

ns
dc

NATIONAL
STAFF
DEVELOPMENT
COUNCIL

July 22, 2008

David Okere
177 Virginia Avenue
Jersey City, NJ 07304

David,

NSDC'S PURPOSE:

EVERY EDUCATOR

ENGAGES IN

EFFECTIVE

PROFESSIONAL

LEARNING

EVERY DAY

SO EVERY STUDENT

ACHIEVES.

The National Staff Development Council is pleased to grant you
permission to make one copy of "Standards Assessment Inventory
Survey Instrument, " (SAI) to use in your doctoral study survey
questions.

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

Copied with permission of the National Staff Development
Council, www.nsdc.org, 2008. All rights reserved.

Thank you for your interest in the Council's work.

Sincerely,

Christy Colclasure

Christy Colclasure
Members Online Service Manager
513-523-6029
513-523-0638 (fax)
christy.colclasure@nsdc.org

NSDC Business Office
504 South Locust Street
Oxford, OH 45056
800-727-7288
513-523-0638 fax
NSDCoffice@nsdc.org
www.nsdc.org

APPEDIX C

CERTIFICATE OF COMPLETION

NIH
WEB-BASED TRAINING

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Davidson Okere** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 07/25/2009

Certification Number: 260683

APPENDIX D

APPLICATION FOR PERMISSION

TO DO RESEARCH

December 7, 2009.

Davidson Okere
177 Virginia Ave
Jersey City, NJ o7304

██████████████████

Jersey City, NJ 07305

Re: Application for Permission to do Research

Dear Sir,
My name is Davidson Okere, a special education teacher at the ████████████
Charter High School in Jersey City. Please permit me to survey the teachers at the Jersey
City Community Charter School for my research study which is a part of dissertation
requirement for the Degree of Doctor of Education at Walden University.

Walden University Institutional Review Board (IRB) regards schools involved in such
studies as community research partners and wants the student researcher to produce a
signed approval letter from those cooperating schools before data can be collected.

████████████ Charter School will not incur financial expenses with regards to this
study. All the financial expenses will be borne by the student researcher.

I hope the researcher will help in the improvement of schools in the Jersey City Schools
and also contribute to social change.

Sincerely

Davidson Okere

APPENDIX E

APPLICATION FOR PERMISSION

TO DO RESEARCH

December 7, 2009.

Davidson Okere
177 Virginia Ave
Jersey City, NJ o7304

███████████████████
████████

Jersey City, NJ 07305

Re: Application for Permission to do Research

Dear Sir,
My name is Davidson Okere, a special education teacher at the ██████████
Charter High School in Jersey City. Please permit me to survey the teachers at the
Soaring Heights Charter School for my research study which is a part of dissertation
requirement for the Degree of Doctor of Education at Walden University.

Walden University Institutional Review Board (IRB) regards schools involved in such
studies as community research partners and wants the student researcher to produce a
signed approval letter from those cooperating schools before data can be collected.

████████████ Charter School will not incur financial expenses with regards to this
study. All the financial expenses will be borne by the student researcher.

I hope the research will help in the improvement of schools in the Jersey City Schools
and also contribute to social change.

Sincerely,

Davidson Okere

APPEDDIX F

APPLICATION FOR PERMISSION

TO DO RESEARCH

December 7, 2009.

Davidson Okere
177 Virginia Ave
Jersey City, NJ o7304

███████████████████████
█████████████

Jersey City, NJ 07305

Re: Application for Permission to do Research

Dear Sir,

Please permit me to survey the teachers in the █████████████ Charter High School
for my research study which is a part of dissertation requirement for the Degree of Doctor
of Education at Walden University.

Walden University Institutional Review Board (IRB) regards schools involved in such
studies as community research partners and wants the student researcher to produce a
signed approval letter from those cooperating schools before data can be collected.

█████████████ Charter High School will not incur financial expenses with regards
to this study. All the financial expenses will be borne by the student researcher.

I hope the research will help in the improvement of schools in the Jersey City Schools
and also contribute to social change.

Sincerely,

Davidson Okere

APPENDIX G

APPLICATION FOR PERMISSION

TO DO RESEARCH

December 7, 2009.

Davidson Okere
177 Virginia Ave
Jersey City, NJ o7304

██████████████████

Jersey City, NJ 07302

Re: Application for Permission to do Research

Dear Sir/Madam,

My name is Davidson Okere, a special education teacher at the ████████████
Charter High School in Jersey City. Please permit me to survey the teachers in Golden
Door Charter School for my research study which is a part of dissertation requirement for
the Degree of Doctor of Education at Walden University.

Walden University Institutional Review Board (IRB) regards schools involved in such
studies as community research partners and wants the student researcher to produce a
signed approval letter from those cooperating schools before data can be collected.

████████ Charter School will not incur financial expenses with regards to this study.
All the financial expenses will be borne by the student researcher.

I hope the research will help in the improvement of schools in the Jersey City Schools
and also contribute to social change.

Sincerely,

Davidson Okere

APPENDIX H

LETTER OF COOPERATION

December 22, 2009

Mr. Davidson Okere
177 Virginia Ave.
Jersey City, NJ 07304

Dear Mr. Davidson Okere,

Based on my review of your research proposal, I give permission for you to conduct the study entitled, "Professional Development: An Aid in the Improvement of Schools." As part of this study, I authorize you to survey the teachers at Jersey City ▮▮▮▮▮▮▮▮ Charter School. Individuals' participation will be voluntary and at their own discretion. We reserve the right to withdraw from the study at any time if our circumstances change. I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University IRB.

Sincerely,

▬▬▬▬▬▬▬▬▬▬▬▬▬▬
▮▮▮▮▮▮▮▮▮▮▮▮▮▮
Head of School

▮▮▮▮▮▮▮▮▮▮▮▮

APPENDIX I

LETTER OF COOPERATION

Jersey City, New Jersey 07305

Jersey City, NJ 07305
dokere@njcu.edu

December 9, 2009

Dear Mr. Davidson Okere,

 Based on my review of your research proposal, I give permission for you to conduct the study entitled, "Professional Development: An Aid in the Improvement of Schools." As part of this study, I authorize you to survey the teachers in the Soaring Heights Charter School. Individuals' participation will be voluntary and at their own discretion. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University IRB.

Sincerely,

Supervisor

APPENDIX J

LETTER OF COOPERATION
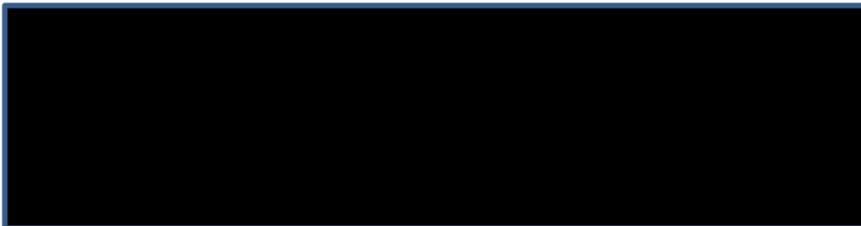
Jersey City, New Jersey 07305

December 15, 2009

RE: Letter of Cooperation from a Community Research Partner

Dear Mr. Davidson Okere,

Based on my review of your research proposal, I give permission for you to conduct the study entitled, "Professional Development: An Aid in the Improvement of Schools." As part of this study, I authorize you to survey the teachers in the University Academy Charter High School. Individuals' participation will be voluntary and at their own discretion. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting. Additionally, I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University IRB.

Sincerely,
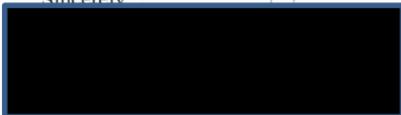
Dean/Principal, CSA

APPENDIX K

LETTER OF COOPERATION

It is our expectation that all students will achieve—No Exceptions, No Excuses

December 15, 2009

Mr. Davison Okere
177 Virginia Ave.
Jersey City, NJ 07304

Dear Mr. Okere,

Based on my review of your research proposal, I give permission for you to conduct the study entitled, "Professional Development: An Aid in the Improvement of Schools." As part of this study, I authorize you to survey the teachers at Jersey City Golden Door Charter School. Individuals' participation will be voluntary and at their own discretion. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this testing.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University IRB.

Sincerely,

APPENDIX L
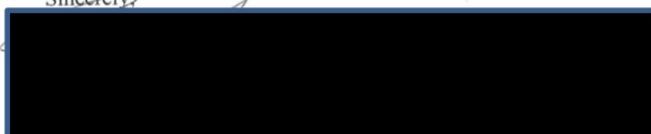
CONSENT FORM

You are invited to take part in a research study of Professional Development: An Aid in the Improvement of Schools. You were chosen for the study because you are among the highly qualified teachers of New Jersey. You have been exposed to many professional development sessions, and are in the position to know the quality of professional developments provided in the district. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Davidson Okere, who is a doctoral student at Walden University.

Background Information:
The purpose of this study is to find out if collegial professional development facilitates the academic improvement of schools in the Jersey City Schools more than the traditional professional development. This study seeks to answer the question that if teachers can take charge of their own development, practice in their classrooms with their peers, and develop cordial and trusting relationship can these factors translate into school improvement?

Procedures:
If you agree to be in this study, you will be asked to:
● Complete the survey questions which will take about 5 minutes
● Drop it off in the provided secure box in the mail room

Voluntary Nature of the Study:
Your participation in this study is voluntary. This means that everyone will respect your decision of whether or not you want to be in the study. No one at your school will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind during the study. If you feel stressed during the study you may stop at any time. You may skip any questions that you feel are too personal.

Risks and Benefits of Being in the Study:
 Participating in this study will not put you at more risk than the minimal risks of everyday life. The study will help to improve the schools where the you work. It will also contribute to social change.

Compensation:
There is no compensation in participating in this study.

Confidentiality:

Any information you provide will be kept <mark>anonymous</mark>. The researcher will not use your information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in any reports of the study.

Contacts and Questions:
You may ask any questions you have now. Or if you have questions later, you may contact the researcher via 201 424 6669 or dnwaok@hotmail.com. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-800-925-3368, extension 1210. Walden University's approval number for this study is 11-19-09--0323911 and it expires on November 18, 2010

 Keep the consent form.

Statement of Consent:

To protect your privacy, no consent signature is requested. Instead, your completion and return of the survey would indicate your consent, if you choose to participate.

APPENDIX M

INTRODUCTORY PROMPTS

The following are what the researcher has in mind in the survey questions which are ranked on a five-point Likert- type scale with 0 representing never, 1 representing seldom, 2 representing sometimes, 3 representing frequently, and 4 representing always.

1. Research-based teaching: Following the importance of research-based teaching, He wants to have an idea of how your school prepares you for teaching with the concept of what works in the classroom.

2. Content knowledge: Bearing in mind that teachers love to teach what they have adequate knowledge about, he wants to know how your school helps you to be an expert in your subject area.

3. Differentiation of instruction: It is important that the diverse learning styles of students in our classroom benefit from the instruction. He wants to know how your school supports you to take care of auditory, visual, tactile, kinesthetic, global and analytic learners in your class.

4. Practical application of knowledge gained from traditional professional development: The importance of professional development is to help improve the quality of teaching in the classroom. He wants to know to what extent you apply what you learned in the traditional professional development in the classroom, particularly when the professional development may not be perceived as relevant to what you teach.

APPENDIX N

This survey will be used for academic purpose only with the intent of using results for the improvement of schools. All responses will remain confidential and when results are discussed, all participants will remain anonymous.
Thank you for participating.

	Never	Seldom	Sometimes	Frequently	Always
Collegiality					
1. At our school, teachers can choose the type of professional development they receive (e.g., study group, action research, observations).	0	1	2	3	4
2. We use several sources to evaluate the effectiveness of our professional development on student learning (e.g., classroom observations, teacher surveys, conversations with principal or coaches).	0	1	2	3	4
3. At our school teacher learning is supported through a combination of strategies (e.g., workshops, peer coaching, study groups, joint planning of lessons, and examination of student work).	0	1	2	3	4
Research Based Teaching					
4. We make decisions about professional development based on research that shows evidence of student performance.	0	1	2	3	4
Content Knowledge					
5. Teachers are provided opportunities to gain deep understanding of the subjects they teach	0	1	2	3	4
6. Teachers receive training on curriculum and instruction for students at different levels of learning.	0	1	2	3	4
Differentiation of Instruction					
7. At our school, we adjust instruction and assessment to meet the needs of diverse learners.	0	1	2	3	4
8. Teachers at our school learn how to use data to assess student's learning needs.	0	1	2	3	4
9. Practical Application of Professional Development in the Classroom					
10. The professional development that I participate in models instructional strategies that I will use in my classroom	0	1	2	3	4
11. We have opportunities to practice new skills gained during staff development.	0	1	2	3	4

Open-ended question:
Please state briefly which type of professional development you took that helped to increase the scores of your students: the traditional lecture method delivered by a hired expert or the one designed by your school which made you work with your peers, provided observation, practice and feedback.

Source: Copied with permission of the National Staff Development Council, www.nsdc.org, All rights reserved.

Curriculum Vitae

Davidson Okere

EDUCATION:

2011   Walden University- Minneapolis, MN
Doctor of Education
Concentration: Teacher Leadership

2002   New Jersey City University- Jersey City, NJ
Master of Arts
Concentration: Special Education

1986   New Jersey Institute of Technology- Newark, NJ
Master of Science
Concentration: Management and Organizational Studies

1984   New Jersey City University- Jersey City, NJ
Bachelor of Science
Concentration: Marketing

PROFESSIONAL EXPERIENCS

2003-Present:
University Academy Charter High School, Jersey City NJ
Special education teacher in an inclusion setting.
Teach Math in a pull out setting
Mentor of six 9th grade students
Affirmative Action Officer

2005   New Jersey City University, Jersey City, NJ
Adjunct Faculty of Multicultural Education for Special Education

2002-2003:   Lincoln High School, Jersey City, NJ

Special Education Teacher in a self-contained setting
Taught Math, Health Science, and Earth Science

1996-2002:   Hollywood Memorial Park Company, Union, NJ
Memorial Counselor, sold mausoleums, and lawn crypts.

1986-1984:   Rite Aid Corporation, Harrisburg MA.
Store Manager, supervised 10 workers, banked money, did inventory
control, and merchandizing.