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The Impact Of Quality Substitute Availability On The Implementation Of Professional Development Programs In The State Of New Jersey

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THE IMPACT OF QUALITY SUBSTITUTE AVAILABILITY ON THE IMPLEMENTATION OF PROFESSIONAL DEVELOPMENT PROGRAMS IN THE STATE OF NEW JERSEY

BY

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Seton Hall University

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DEDICATION

To my parents—Marion and Louis Zawadski—who are no longer here with me on earth but forever in my heart. Their unconditional love enabled me to recognize that there is no risk in failing to realize one’s dreams rather the failure lies in not dreaming to realize.
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CHAPTER 1

INTRODUCTION

Schools today face enormous challenges as they attempt to respond to an increasingly complex society and a rapidly changing, technology-based economy. Schools are asked to educate the most diverse student body in our history to higher academic standards than ever before. This task is one that cannot be "teacher-proofed" through management systems, testing mandates, or curriculum packages. At its root, achieving high levels of student understanding requires immensely skillful teaching. This requires schools that are organized to support teachers in continuous learning (Darling-Hammond & McLaughlin, 1995). The precious gift of time to enable teachers to participate in activities such as: lesson study, workshops, action research, and mentoring often require release time from classroom responsibilities. Quality substitute teachers are needed to implement professional development programs so that students are not left without the necessary professional support to facilitate their learning.

At a time in education when there is heightened attention to providing standards-based education and increased accountability for student achievement, administrators need to evaluate quality substitute availability and the implications associated with meeting the needs created by teacher absenteeism and implementation of cohesive and effective professional development programs. New
demands on teaching and learning are requiring substantial retooling of district staff. Districts are recognizing that one-shot workshops are not a solution to providing faculty with on-going support. Developing a cohesive professional development model which enables teachers to do action research, observe and reflect, team-teach, and coach/mentor, etc. to some extent relies on available quality substitutes.

Substitute teaching is a complicated subject to study. Students all over the country are spending increasing amounts of time with substitute teachers. Approximately 10% of a child's school year is being taught by substitute teachers (Staffing Industry, 1999). Over the course of 13 grades (K-12), this statistic suggests that over one year of every student's education is being taught by substitute teachers (Smith, 1998). In highly impacted schools, at-risk students are spending closer to 13.5% of each school year with a substitute teacher (Adams, 1999).

Current market conditions for substitute teachers (increasing demand, decreasing availability) have likely contributed to less stringent application procedures, absence of training, and minimal formal evaluation. It has been suggested that substitute teaching is characterized by "weak incentives, little training, and increased demand" for services (Griswold, & Hughes, 2000, p. 15). Although a wasted day of instruction may not seem intolerable, when considered in the overall picture, one full year of a student's K-12 education being wasted is unsettling.

Professional development is not new. What is new is that at no other time in history has in-service education and professional development been more important
than it is today. As reported by Guskey, "in nearly every field, the professional knowledge base is expanding at an ever-increasing rate. Technological advances are occurring so rapidly in some areas that one can lapse into professional obsolescence in a matter of months" (Guskey, 1991a, p. 239). National and state standards, international studies and findings, and the information highway are impacting the classroom teacher and the way he or she conducts business. To remain optimally effective it is imperative that professionals remain actively engaged in professional development activities that nurture the process for sustained systemic change.

In "Every Teacher Can Be Best", an outcomes article written by Thomas Guskey (1991b), one can find supportive evidence for the motivation behind developing a systemic cohesive professional development design to enable all teachers to maximize their potential and their students' understanding and performance.

Research shows that it is not what they are, but what they do, both in their teaching and preparation for teaching that make some teachers so outstanding... of the traits shared by exemplary teachers, one of the most evident is the combination of a clear vision of what they want their students to attain and a well organized plan of how that vision can be accomplished (Guskey, 1991b, p. 26).

Historically, staff development efforts have been characterized by teachers as disorganized, tempered with conflicting opinions or foci, and lacking direct connection or transferability to the classroom. A cohesive systemic plan centered
around more creative ways of “working with” (i.e. lesson study, coach/mentorship, etc.) rather than “working on” (i.e. using didactic approach) teacher learning, for the ultimate goal of improved student learning is permeating the professional development arena. Accountability at all levels is focusing the investment made in professional development programs on maximizing student outcomes (Sparks & Hirsch, 1997). School professional development programs viewed as a community system creates a strong image. Susan Moore Johnson considers teachers to be true colleagues when they are “working together, debating about goals and purposes, coordinating lessons, observing and critiquing each other’s work, sharing successes and offering solace. The triumphs of their collective efforts far exceed the summed accomplishments of their solitary struggles” (Johnson, 1990, p. 148), thus crediting the power of team effort. A teacher development program that simply provides participants with a repertoire of teaching strategies and techniques may leave participants unaware of why a particular practice should be implemented. Teachers need to experience as students experience, the constructivist way, so they can recognize for themselves what works.

In his book, The Courage to Teach, Palmer (1998) reminds us not only of the complexity of becoming a teacher, but also of the resources available in our experienced staff. To grow in practice, there are two primary places to go: to the inner ground from which good teaching comes and to the community of fellow teachers. The resources we need in order to grow as teachers are abundant within the community of colleagues. Reflective conversation about good teaching is needed to enhance both professional practice and the selfhood from which it comes.
(Palmer, 1998). It is foolish to think that growth can come from one source. Empowering and enabling one's staff to support one another is not only necessary, it is practical, and it is a crucial element for ongoing success. The school community becomes the support provider. It's one thing for teachers to learn a method; it's another thing to expect teachers to commit to a philosophy. Teachers need to be given the opportunity to learn about current ideas and research in education in order to make choices about philosophical and theoretical matters. Teachers grow in knowledge throughout their careers.

Learning in schools is about more than decisions. It is about our daily work together, including our reflection, dialogue, inquiry, and action. This work involves new roles and responsibilities that reframe all of our interactions together, not just those at decision points (Lambert, 1998). As teachers work together in the team planning process, efforts should be made to correlate content, skills, and personal development activities (Merenbloom, 1991).

Planning and designing a district professional development system challenges administrators and teachers alike to become captains of their destiny, rather than prisoners of their fate. Ideally change is envisioned as an ongoing process, long-term, and respectful of both individual needs and societal concerns. Regardless of the model or framework set in place, enabling teachers to attend conferences, do action research, observe peers, etc., at some point, fosters a reliance on the availability of quality substitutes.

Education in the 21st century must focus on the big issues. Teacher shortages and quality substitute shortages are chronic and severe. As reported by
Dorward, Hawkins, & Smith, (2000) "the U. S. Department of Education predicts that over the next 10 years, nearly a million teachers will retire. The replacements for those retiring teachers may be hired from already-diminished teacher pools" (p.40). Neither quality nor quantity shortages have diminished in a decade. This is in spite of an annual federal investment in personnel preparation amounting to tens of millions of dollars. A quality supply of substitute teachers is necessary in order to allow permanent teachers to participate in professional development opportunities. “It has been estimated that 77 percent of teachers are reported to attend professional development classes sponsored by their school system. However, in some cases, the shortage of substitute teachers has made it necessary for districts to reduce or cease professional development programs” (Dorward, Hawkins, & Smith, 2000, p. 40). This is especially true of those staff development activities that are planned for the course of the school day and require release time.

Recently, administrators have been forced to reduce requirements for substitute teachers in an effort to generate enough substitutes. In 1998 alone, six states were reported to have reduced their qualifications for substitute teachers (Greene, 1998).

These concerns, if substantiated, have important implications for state and local educational policy makers and administrators. If substitute teacher availability, pay, and influence on teacher development is problematic, a quality education cannot be ensured (Dorward, Hawkins, & Smith, 2000).
Purpose of the Study

Given the importance of professional development to increasing the knowledge base, and the need to move away from traditional delivery modes of professional development – this study seeks to investigate what impact, if any, does the availability of quality substitute teachers have on the implementation of professional development programs in the state of New Jersey.

With some modification this work was designed to replicate an earlier national study completed by Dorward, Hawkins, and Smith (2000). This study was conducted in New Jersey for the purpose of identifying availability of quality substitute teachers, daily pay rates for substitutes, and possible effects on teacher professional development programs in light of the new state 100-hour teacher certification mandate.

Problem Statement

Is a shortage of quality substitute teachers in New Jersey affecting the ability of schools to provide professional development for their full time staff? This study specifically addressed the following research questions:

1. How do districts in New Jersey rate the quality of their substitute teachers?

   Subsidiary questions:
   
   a) What are the educational requirements for employment as a substitute teacher?

   b) What are the required processes for hiring substitute teachers?

2. To what degree is substitute teacher availability a problem at the state level?

   Subsidiary questions:
a) What are the recruitment procedures used by most districts?

b) How is quality substitute availability related to selected demographic characteristics of a district, such as: district factor group (DFG)? community type? enrollment size? per pupil expenditure? Percent of students eligible for free or reduced lunch?

3. How are quality and availability factors of substitutes related?

4. What is the pay for substitute teachers?

   Subsidiary question:

   a) To what degree is substitute pay related to selected demographic characteristics of a district, such as: DFG? community type? enrollment size? per pupil expenditure? Percent of students eligible for free or reduced lunch?

   Recognizing that there is a dependency on a viable pool of quality substitutes to successfully plan and implement both professional development programs and implement targeted curricula expectations and designs when regular teachers are absent from their classes, this study also examines the issue:

5. To what degree has teacher participation in school improvement and professional development activities been jeopardized by the lack of substitute teachers?

   Subsidiary questions:

   a) What form are district professional development programs taking in the state?
b) What percent of professional development opportunities are dependent on quality substitute availability?

c) Is the new state 100-hour initiative impacting district need for substitute coverage?

d) If quality substitutes were readily available would professional development program designs be altered?

e) To what degree do DFG and community type influence the impact ascertained?

Limitations

This study is designed to include a proportional sample of the 573 autonomous public school districts within the state. However, the voluntary nature of participation in the study may affect generalizability of results. Some counties or regions may be over or underrepresented and the response rate may be less than anticipated. This suggests the possibility of nonresponse bias.

It is important to recognize that other factors impact implementation of professional development programs (i.e. resources, quality of programs, etc.). This study is limited to one variable, namely, looking only at quality substitute availability and its import.

Another plausible limitation of this study is the lack of clarity offered to respondents regarding what “quality“ means. Nowhere on the survey instrument was “quality“ defined for the respondents. People responding may have operated with different notions or assumptions. This suggests a possibility of variance in operational definition of quality.
An additional limitation, although this study was meant to be a replication study, this researcher looked at only some of the variables considered in the original study. Therefore, the study replication value can only be measured in so far as the New Jersey results are consistent with the original study.

Significance of Study

This study provides New Jersey data to begin to engage leaders in meaningful discussion with respect to substitute policies, procedures, and nurturing. As research indicates, teacher shortage as well as substitute shortage is on the rise (Mooney, 2000; and as cited in Ingersoll, 1995). Educational administrators and policy makers in New Jersey as well as nationally must become proactive with respect to addressing the issues of substitute availability and teacher professional development.

As districts in New Jersey continue to examine the necessary components of delivering a successful standards-based curriculum program to all students, examining teacher support structures remains part of the process. Helping professionals to meet the new challenges of curriculum, assessment, and implementation of instructional strategies for a diverse population, requires providing meaningful experiences through which reflection, dialogue, inquiry and action research can be fostered. Models such as: lesson study, mentoring, coaching, etc. requires planning and providing professional development opportunities for teachers that enable faculty to work with colleagues. Often these models necessitate providing substitute coverage at some point in the process. At the forefront statewide is a fairly new initiative of developing a district professional
development plan to produce valuable experiences for the participants and ultimately culminate in enhanced student learning. Availability and reliance on quality substitutes would empower district leaders with greater flexibility in designing and implementing professional development opportunities and provide teachers with the comfort and knowledge that instruction in their absence is being delivered.

Definition of Terms

Quality substitute teacher availability: competent, reliable replacements.

School improvement: capacity of the organization to solve problems and renew itself.

Professional development: is the sum total of formal and informal learning pursued and experienced by the teacher in a compelling learning environment under conditions of complexity and dynamic change.

DFG: district factor group (the socioeconomic status of citizens in each district used to categorize districts for comparative reporting based on census data).

100-hour mandate: as defined by the New Jersey State Department of Education, beginning in September of 2000, every holder of a New Jersey teaching license must participate in 100-hours of approved professional development activities within every five-year period of contractual employment. If a teacher is on a leave of absence, his/her clock stops during the duration of the leave. It is the responsibility of the teacher to ensure that all activities are in line with his/her professional improvement plan, in keeping with his/her district's mission, and is responsible to be the keeper of the records.
CHAPTER II

REVIEW OF RESEARCH AND RELATED LITERATURE

A review of research and related literature produced a substantial and dynamic context for the primary purpose of this study: to determine the impact of quality substitute availability on the implementation of professional development programs in the state of New Jersey. The review comprises seven sections. Section one tracks the availability of quality substitutes. Section two presents information regarding reform and professional development. Section three identifies the need for a support structure for teachers. Section four defines different ways to develop a community of teacher-learners. Section five characterizes a model for professional development. Section six examines the significance of the national Professional Teaching Standards. Section seven focuses on outcomes.

Availability of Quality Substitutes

In a recent study conducted by the Substitute Teaching Institute at Utah State University, Dorward, Hawkins, and Smith (2000) found that availability of quality substitute teachers in the United States is problematic. Their findings reveal that the problem appears to vary by region, district per-pupil expenditure, type of community, student enrollment, and associated full-time equivalent (FTE) staffing ratio. The results also indicate that district administrators consider substitute
availability a more serious problem when teacher professional development is jeopardized.

Of late, a shortage of teachers as well as a shortage of substitute teachers permeates the conversation among educational leaders throughout the state of New Jersey as well as nationally. A strong economy, an increase in student enrollment, retention of teachers, retirement forecasts of one-third of the current teaching population, and mandated pre-school and kindergarten programs are among contributing factors to this shortage.

School districts that report low availability of substitute teachers point out that shortages cause a multitude of problems. Paraprofessionals are being pulled from their regular duties to be used as substitutes. Classes are divided with students being sent into what many times are already crowded classrooms. In some schools, teachers are asked to help out by ‘subbing’ during their planning period, while in other schools, administrators pressure teachers to ‘sub.’ Some school districts have had to cancel classes due to low availability of substitute teacher (as cited in Dorward, Hawkins, & Smith 2000, p. 40).

Recently, administrators have been forced to reduce requirements for substitute teachers in an effort to generate an ample supply. In 1998 alone, six states were reported to have reduced their qualifications for substitute teachers because of substitute shortages (Greene 1998).

Reduction of qualifying criteria has important implications for state and local educational policy makers and administrators. A quality education cannot be
ensured when substitute teacher availability, pay, and influence on teacher
development is problematic (Dorward, Hawkins, & Smith, 2000).

Respondents to the national survey of school districts conducted by Dorward, Hawkins, and Smith, (2000) indicated current availability of substitute teachers to be a problem. Slightly more than 86 percent of school districts nationwide indicated that availability of substitute teachers was either a "problem" or a "serious problem." School districts located in the Northeast region of the country appear to have particularly acute shortages. Likewise districts with per pupil expenditures between $4,000 and $6,000 are more likely to indicate substitute shortages. Surprisingly, districts with the highest per-pupil expenditures are not necessarily those with higher daily pay rates for substitutes. Districts in urban and suburban areas indicate higher substitute shortages than districts in rural or small city settings. As might be expected, districts with higher enrollments and staff indicate a greater problem with substitute availability (Dorward, Hawkins, & Smith, 2000).

Pay for substitute teachers ranges widely. The average daily pay for a non-certified substitute teacher nationally is $65, with a range from $30 and $140 nationally. The average pay for certified substitute teachers is $67.50 and ranges from $35 to $185. Substitute pay according to this national study, appears to be a function of district location, per pupil expenditures, percent of students on free or reduced lunch programs, and whether districts have collective bargaining agreements with teachers or substitute teachers (Dorward, Hawkins, & Smith, 2000). The collective findings of this national study suggest that educational
administrators and policy makers must be proactive with respect to substitute policy and procedure.

Another recent study focuses on addressing the shortage problem by zeroing in on the quality and training of substitute teachers (Tannenbaum, 2000). Tannenbaum using estimates on the prevalence of substitute teachers from the early 1980s found that “on any given day, substitute teachers filled 10 percent of the nation’s classrooms; and that the typical student spent seven days of every school year, or approximately 84 days during 12 years of schooling, with a substitute teacher” (Tannenbaum, 2000, p. 70). According to Tannenbaum, two recent practices have likely increased the use of substitutes: expanded family leave policies and in-service programs for regular teachers held during the school day. In light of this extensive use of substitute teachers, Tannenbaum (2000) surveyed the superintendents in seven New Jersey counties.

Several ideas for supporting substitute teachers and improving substitute teaching emerged from Tannenbaum’s research. One idea that emerged was that of job satisfaction. Many substitutes indicated that their best substituting experiences were in schools with a strong support system that included the principal, the other teachers, and the secretaries. The districts reporting the fewest problems with attracting and retaining substitutes dedicated at least one full day before the start of the school year to an in-service program for substitutes. Some also reported periodic after-school training sessions throughout the school year. Building capacity and commitment was also supported by building partnerships with teacher education programs to acquire trained substitutes as early as students’
sophomore year and for the following years until graduation from local universities. A second possibility that emerged was developing the concept of career substitutes. Tannenbaum (2000) proposed:

> Individuals would complete a two-year associate degree program to receive certification as a substitute teacher. Districts might assign such teachers to schools on a full-time basis so that they get to know well the routines, teachers, and students. These substitutes then take over regular teachers' classes with a minimum of disruption (p. 72).

Given the acknowledged importance of academic learning time, Tannenbaum's study (2000) suggests that the dearth of quality substitutes needs to be addressed and one path to recovery may indeed be recognizing that substitutes also need training and support. Implied is the premise that lack of commitment to quality and training of the substitute teachers, is one reason why a particular district may be compounding its shortage in the substitute pool. This study suggests that administrators must change their thinking about the role that substitute teachers should play in the teaching and learning process.

Widespread school restructuring, school-based management, and redefinitions of teacher work that emerged from the school reform movement of the mid-1980's have involved classroom teachers in a variety of nontraditional, noninstructional activities, such as curriculum design, mentoring novice and preservice teachers, conducting action research, and working on collaborative teams with peers and college faculty. Employing substitutes is one method of covering the classes of teachers who participate in such activities during the school
day (Abdal-Haqq, 1996). Collective bargaining, the Family and Medical Leave Act, and initiatives such as, New Jersey’s Professional Development requirement of 100 hours of continuing education credit are impacting the role of substitute teachers in the school setting by creating a need for their services in order to provide the classroom teachers with release time during the course of the school day to engage in professional development activities or to attend to the family.

Studies have shown that relatively few individuals work as substitutes for more than a year, and even fewer make a career of it. Wyld reports, “consequently, the composition of the substitute pool constantly shifts, necessitating a continual need to replenish the supply of qualified individuals” (Wyld, 1995, p. 305).

According to the Substitute Teaching Institute research, the number one reason substitute teachers leave or quit is a perceived lack of administrative support (Sub Exchange Newsletter, 1999). Administrators, principals, and administrative assistants must set the example of professional recognition and courtesy by showing support and respect for substitute teachers and the work they do in the classroom.

Following two negative incidents involving substitute teachers, the supervisor of Personnel for Hillsborough County Schools (FL), Bob Minthorne said: "Needless to say, we saw a drastic decline in the number of applicants interested in working as substitute teachers. Just when I thought that things couldn’t get any worse…we had a third incident. This headline read, "Substitute Teachers May Get Training". This was the kind of incident I like.
The School Board voted to begin the training of substitute teachers before they go into the classroom. Our phones began to ring off the hook almost immediately with applicants interested in working as substitutes. Many stated that they had always been interested in "subbing", but did not feel that they were adequately prepared for the job. With a training program, they were ready to give "subbing" a try! We began implementation of our substitute-teaching program in August 1997, and immediately saw an increase in the number of substitute teacher applicants. By the year’s end, we had more than 1,600 subs. In addition to attracting more applicants, the effects of training were evident in the increased performance of substitutes (Submanagers, 2000, retrieved October 16, 2000 from http://subed.usu.edu/managers/res.htm).

Vail (2000) reports that "despite the ongoing shortage of substitutes, many school districts continue to pay little or no attention to the needs of their substitutes" (p.36), according to Thomson, a retired teacher who for the last 12 years has been "subbing" in the Boston Public Schools. Such neglect, he says, "leads to fewer qualified people willing to become substitute teachers and exacerbates the shortage" (Vail, 2000, p. 36). Improving working conditions and changing the way school districts view their substitutes has become a passion for Thomson, who founded the National Association of Professional Substitute Teachers several years ago. In July of 2000, in Washington, D.C. he presided over the first national conference for substitute teachers. Thomson estimates there are about a million substitute teachers in the United States (Vail, 2000). Thomson’s goal closely aligns
to Tannenbaum’s findings namely that all school districts need to treat substitutes like professional educators, not babysitters. Schools should pay their permanent, full-time substitutes the same rate as regular contract teachers, he says. Training, both orientation and ongoing, is especially important (Vail, 2000).

At a summit meeting on substitute teaching hosted by the Substitute Teaching Institute at Utah State University, a diverse group of 22 public school administrators and personnel directors representing schools and districts from Alaska to Florida, with student enrollments ranging from a few hundred in rural settings to over 150,000 in urban districts the following commonalities were found:

(a) Better bail is not necessarily better pay
(b) Professional acceptance and social inclusion often play a large role in substitute teachers’ job satisfaction
(c) The backbone of a viable substitute teaching program is training
(d) On-site administrators can have a profound impact on establishing and maintaining adequate pools of qualified substitute teachers (Jones, 1999, pp.1-6).

Reform and Professional Development

With today’s call for higher standards in schools and school accountability of school achievement, it would be ideal if one could hire substitutes who were well-versed in the school’s curriculum and could work as a team with classroom teachers, participating in faculty meetings and following up with parents if a student misbehaved. The advantage of familiarity is prompting more school districts to hire permanent substitutes. Superintendent Sally Dias in Watertown, Massachusetts,
keeps a few permanent substitutes on the payroll and then "stole an idea from Neighboring Newton" (Kelly & Reilly, 1999, p. 5) and hired what Dias calls "instructional support staff" (p. 5). These part-time, permanent substitutes are assigned to specific schools for one to three days and, when possible, participate in professional development and staff meetings (Kelly & Reilly, 1999).

As reported by Kelly & Reilly (1999), program director for the National Science Foundation's (NSF) Teacher Enhancement Program, Joyce Evans, contends that substitute teachers can make or break school reform efforts. "If you use substitutes on a regular basis, you want to be sure that what the substitute is doing is good for the children," notes Evans, "otherwise the reform backfires" (as cited by Kelly & Reilly, 1999, p. 7). Seventy-two school districts have received NSF grants to retrain their teaching staff in math and science education. The NSF encourages them to include substitutes in the program.

The Midland Public School District near Detroit is one of the NSF grant recipients. For the past four years the district has conducted a two-week summer institute that trains elementary school teachers and substitutes to teach science. Sarah Lindsely, the district's science curriculum coordinator says:

The substitutes show more confidence in their instruction and ability to supplement what the science teachers are doing. This also gives them the chance to work with the teachers when they substitute. It gives them the chance to collaborate. The substitutes say that schools could go a long way toward solving their shortages just by making the workplace more inviting. (as cited by Kelly & Reilly, 1999, p. 7)
Providing teachers with rich professional development opportunities sometimes requires absence from classroom instruction. Increased student achievement also requires consistent, reliable instructional guidance within the classroom setting. Building a systemic community of learners among our instructional staff requires dependency on a community of quality substitutes. Valuable instructional time of both the classroom teacher and the student learner is becoming more dependent on our resource known as quality substitute teachers.

Professional development requires the gift of time and commitment. "Like other professionals, teachers cannot become effective by following scripts. Instead they need to create knowledge in use as they practice...knowledge does not exist apart from teacher and context" (Sergiovanni, 1992, p.9).

Lee Stiff, current president of the National Council of the Teachers of Mathematics, points to the potential for improved professional development as realized in Japanese schools. A practice known as lesson study is widely utilized in Japan to support teacher growth and development. It requires a significant investment in time and effort. Lesson study involves a group of both new and veteran teachers working together on four essential activities: (1) setting goals and objectives they want to accomplish with their students; (2) creating a detailed lesson plan, a "study lesson," that can be used to examine the selected goals and objectives; (3) teaching the study lesson to students while other group members and teachers observe; and (4) analyzing and reflecting on the observed instruction and assessing what was learned about the goals and objectives that were set (Stiff, 2000).
Stiff reports:

The influence of lesson study in Japan appears to have resulted in elementary school lessons that are typically much more developed and of higher quality than are lessons in the United States and Canada. Data from the Third International Mathematics and Science Study (TIMSS) show that Japanese teachers are much more likely than U.S. teachers to develop concepts through examples and to connect content to applications and students’ prior knowledge. Of course, developing concepts, making connections, and identifying appropriate representations of mathematics require a greater investment of time. (p. 3)

An important first step is to look at existing support structures within the school setting. Lesson-study use is already underway in several states, including Illinois, Washington, Michigan, and Connecticut, and the Commonwealth of Puerto Rico. Renewed attention to the elements of good lesson planning and implementation, whether it be lesson study or some variation, only makes sense, and to some degree is dependent on quality substitute teachers.

On May 1, 1996 the New Jersey State Board of Education adopted Core Curriculum Content Standards, and subsequently 48 other states have done the same. The standards include seven content areas as well as workplace readiness standards, which cross all content areas. Soon these standards will be up for revision as legislated, and talk of adding a technology education standard is already in the wind. Collectively, they embody a vision of the skills and understandings all
children need to step forward into the twenty-first century and to be successful in their careers and daily lives.

Changing a school's curriculum, instruction, and assessment to implement the vision requires implementation of carefully planned professional development programs. Change requires substantial investments of time, energy, and support. Professional development, affecting the beliefs, attitudes, knowledge, and practices of teachers in the school, is central to achieving this change. How can we ensure that the professional development programs we implement are effective?

Guskey's (1991a) guidelines for enhancing the effectiveness of professional development programs target certain factors that appear to contribute to program success, namely: 1) recognition that change is an individual process; 2) the ability to think big but start small; 3) working in teams; 4) the inclusion of procedures for personal feedback on results; and 5) the presence of provisions for continued support and follow-up. Guskey (1991a) contends that although addressing all of these factors will not necessarily guarantee a successful program, strong evidence indicates that neglecting any one is likely to limit the effectiveness of the program to bring about significant or enduring change.

A journal article by Gary Sykes (1996), explains:

Two judgments frame the contemporary concern for the professional development of teachers: 1) teacher learning must be at the heart of any effort to improve education in our society (while other reforms may be needed, better learning for more children ultimately relies on teachers) and 2) conventional professional development is sorely inadequate. (p. 465)
The Need for a Support Structure

Developers of teacher enhancement programs have increasingly come to recognize the utility of providing substantial support to teachers attempting to implement in their classrooms the knowledge and skills learned in a program. One-shot workshops with no follow-up support have proven ineffective for changing teacher behavior or increasing students' learning (Fitzsimmons, Kerpelman, 1994). The Concerns Based Adoption Model (CBAM), (Hall, Wallace, Dossett, 1973) suggests that rather than measure "happiness coefficients" at the end of workshops, one should monitor teacher concerns as they move through internalization and development, or from awareness to refocusing. Support is necessary so that the anxiety of occasional failures can be tolerated and implementation efforts can continue. Coaching, providing practitioners with technical feedback, allowing them to work together with colleagues, observe and reflect, guiding them in adapting the new practices, and helping them to analyze the effects of their efforts are crucial to facilitating meaningful change (Showers & Joyce, 1987).

Teachers have an enormous responsibility to send children soaring off to self-confident and enthusiastic learning (Wasley, 1999). In past decades, researchers, professional development providers, and district personnel suggested erroneously that if we just focused on curriculum reform (the 1960s) or pedagogical reform (Madeline Hunter in the 1970s) or performance assessments (the 1980s) or multicultural curriculum reform (the 1990s), participating teachers would better meet the needs of their students. Practicing teachers can easily compile a list of techniques or research-based approaches that they have been
introduced to during the course of their careers. However, does exposure over time to such a plethora of strategies, ensure that all teachers will mature into strong, competent, effective teachers? (Wasley, 1999).

Wasley (1999) suggests that there is a need for a developmental approach to teacher learning, namely:

**Step 1. Developing a Repertoire:** Teachers need a range of strategies for dealing with curriculum, pedagogy, assessment, and school context because students are different; no technique works every time for all kids and no two buildings operate the same.

**Step 2. An Interconnected System of Support:** Colleges of teacher education need to collaborate with school districts and unions to provide a consistent and coherent image of teaching as the development of a repertoire.

**Step 3. Teacher Preparation in the First Two Years:** College faculty, cooperating teachers, mentors, and administrators need to think more deeply about what new teachers need to run their own classrooms with diverse groups of children. The first days of school can be manageable and exciting.

**Step 4. Mentoring:** The mentoring process during the first two years of teaching should reinforce what it means to be a professional teacher. Mentor teachers skilled in helping teachers assess their skills and progress—who can also help them understand the resources that exist both within and out of the district, must be available to help new teachers
continue to build their repertoire of an ever-expanding set of skills for engaging children in learning.

**Step 5. Professional Development:** Enhancing the effectiveness of professional development programs is seen as attainable if the program is built on a model that: a) recognizes that change is an individual process; b) suggests that thinking big: but starting small is optimum; c) supports working in teams; d) includes procedures for personal feedback; and e) embraces the presence of provisions for continued support and follow-up.

**Step 6. A Staged Teaching Career:** The belief that teaching is a profession that requires that its members mirror what we most want for our children: a commitment to a life full of enthusiastic, stimulating, and difficult learning. Education is not an instrument to achieve some goal — which automatically demeans the role of education. Rather, education is the development of the self. (pp. 8-13)

Teachers who are nurtured and supported, engaged in their learning and growth, see themselves as different, as professionals and not just as instrumentalists or mechanics in the classroom. Teaching is a profession of high demand and high expectation, a profession in which you always have to be learning more. New teachers are expected to listen carefully to administrators, parents, mentors, and other colleagues, who overwhelm them with advice on such topics as teaching strategies, state curriculum standards, policies and procedures of the school, and classroom discipline. Some of this advice may be welcomed and even helpful. The problem is that although new teachers must
listen to others, seldom do others listen to them (Rogers, 1999). Giving new teachers the opportunity to listen to one another gives them the chance to be taken seriously and to appear adequate and normal at a time in their personal and professional lives when their confidence is shaken and they are constantly questioning their competence.

Developing Communities of Teacher-Learners

It is important that different ways of developing communities of teacher-learners be considered. Higher standards, accountability, technological advances, the rising number of teacher retirements, and increasing student enrollments all contribute to the realization of continued interest and need for systemic professional development programs that focus on the teacher learner and increased student achievement. The U.S. Department of Education estimates that the nation’s schools will need to hire an additional 2.5 million teachers within the decade (Mooney, 2000). New Jersey has approximately 90,000 teachers and approximately one-third of that population will be eligible for retirement in the next five years. Local news writers, Ford and Shields, report that the dearth of teachers, irks students; and motivates some to walk out (Ford, & Shields, 2000). Extreme teacher shortages have spawned a plethora of alternative, backdoor, and emergency approaches to certification and licensure, often with the blessing (if not at the instigation) of State Departments of Education. Adding fuel to the fervor is the sentiment from outside our profession that professional standards for preparation of teachers are self-serving, bloated, overly regulatory, and anachronistic.
Two foundations have been particularly vocal in their disdain for traditional teacher education. Sindelar & Rosenberg (2000) report that the Milken Family Foundation has asserted that:

(a) teacher education does not equip first-time teachers to take on the responsibilities of veterans, (b) theory does not transfer well to real world teaching, and (c) the process of learning to teach tends to be an exercise of unguided and unexamined trial and error. (p. 19)

Similar to this, the authors, Sindelar & Rosenberg (2000), report that the Thomas B. Fordham Foundation contends that:

standards-based quality control has failed. The foundation argues that not only are standards minimal, but that they emphasize the wrong things. In their policy manifesto, the foundation questions the regulatory strategy assumption that good teaching rests on a solid foundation of specialized professional knowledge about pedagogy, and goes as far as to question the scientific validity of the research base. In short, the foundation believes that present standards do little to screen out ill-prepared teacher candidates, yet they serve to discourage talented liberal arts graduates who wish to teach. (p. 5)

In New Zealand, a nationwide induction program began in the early 1990s. This program allows for all new primary teachers (K-8) to be released up to 20 percent per workweek for the purpose of staff development. Renwick and Vize (1993) report:
All schools employing a beginning teacher [are] entitled to an additional 0.2 teaching entitlement per week in order to assist the beginning teacher’s professional development and to release either the beginning teacher or other teachers in the school to work with the beginning teacher. (p. 45)

During this planned release time, the new teacher may meet with his or her tutor teacher (mentor), observe in the tutor’s classroom, or have the tutor observe or participate in the new teacher’s own room. In consultation with the tutor and principal, the new teacher may use this release time to write lesson plans, do paperwork, plan curriculum, visit another teacher’s room, or return to the university to research a special problem. To make this release time work, without hampering the achievement of students in the classroom, a permanent substitute is hired to replace the new teacher at given times. The substitute comes the same time and day every week, so students always see the same substitute. Sometimes the substitute will replace the tutor teacher so that he or she can go into the new teacher’s classroom.

Saul Cooperman, a former New Jersey education commissioner, cites that action research, is a practical example of true staff development (Cooperman, 2000). A practical example, illustrated by Cooperman, (2000) depicts a teacher who was having problems teaching about monopolies and competition. The teacher read extensively about the case-study method and then visited a gifted teacher in another district to see how she implemented this approach.
Observing, reflecting, and discussing her methodology and approach provided him with the “seeds of opportunity”.

The teacher learned and applied the new knowledge in his classroom to the benefit of students. In Cooperman’s (2000) opinion, that is “true staff development” (p.7). Action research is a construct offered with the intent to:

(a) Professionalize teaching.

(b) Enhance the motivation and efficacy of a weary faculty.

(c) Meet the needs of an increasingly diverse student body.

(d) Achieve success with “standards-based” reforms.

As Sagor (2000) aptly outlined:

Teaching in North America has evolved in a manner that makes it more like blue-collar work than a professional undertaking. Although blue-collar workers are expected to do their jobs with vigilance and vigor, it is also assumed that their tasks will be routine, straightforward, and, therefore, easily handled by an isolated worker with only the occasional support of a supervisor. Professional work, on the other hand, is expected to be complex and nonroutine, and will generally require collaboration among practitioners to produce satisfactory results. With the exploding knowledge base on teaching and learning and the heightened demands on teachers to help all children achieve mastery of meaningful objectives, the inadequacy of the blue-collar model for teaching is becoming much clearer. When the teachers in a school begin conducting action research, their workplace begins to take on more of the flavor of the workplaces of
other professionals. The wisdom that informs practice starts coming from those doing the work, not from supervisors who oftentimes are less in touch with and less sensitive to the issues of teaching and learning than the teachers doing the work. Furthermore, when teachers begin engaging their colleagues in discussions of classroom issues, the multiple perspectives that emerge and thus frame the dialogue tend to produce wiser professional decisions. (p. 9)

Rothstein examines the pernicious mix of myth and reality that underlies the campaign against supposed teacher inadequacy. He asks one to consider the now-conventional assertion being advanced by both the Progressive Policy Institute (PPI) and the Thomas B. Fordham Foundation that students who enroll in teacher education programs in U.S. colleges tend to have lower scores on SAT and ACT exams than those in virtually all other programs of study. This assertion may taint the picture for the wrong reasons as to why ongoing professional development is sorely needed. Rothstein (1999) states:

This claim usually originates with analyses of voluntary questionnaires distributed by the Educational Testing Service (ETS) with SATs showing that high school juniors and seniors who plan to major in education have lower average scores than classmates who plan arts and sciences majors. Yet the reality is that high schoolers announcing intended majors may eventually major in other fields; majors in education may not attempt to become teachers or may fail qualification tests if they do try to teach; and arts and sciences majors may teach after taking course in pedagogy or
(increasingly) after earning a master’s degree in education. High schoolers’ SAT questionnaires provide no useful information about the abilities of actual teachers. Another common analysis – of the SAT scores of entering freshmen at colleges that graduate teachers – isn’t helpful either. (p. 2)

Rothstein (1999) further claims that:

ETS studies of actual teachers in fact show their academic abilities comparing favorably with those of other professionals. Analyzing the 1992 National Adult Literacy Survey, ETS found that the verbal scores of teachers are higher than those of managers but similar to those of lawyers, engineers, accountants, and social workers. In quantitative skills, teachers are on par with most other managers and professionals. ETS also looked at the high school SAT scores of those who later passed Praxis tests, used by many states for licensing teachers. High school teachers who passed Praxis tests in math, social studies, foreign languages, science, and English had higher SAT scores than college graduates generally. Teachers who passed Praxis tests in physical education, special education, elementary education, and art and music had lower SAT scores. Claims of low teacher ability are unfounded. We know that bright teachers with higher than average scores do generate higher student achievement. James Coleman’s 1966 analysis “Equality of Educational Opportunity” made this argument. It was reinforced in a widely circulated study of Texas student achievement, published by Kennedy
School scholar Ronald Ferguson in 1991. Reports by Dominic Brewer of the RAND Corporation and his colleagues confirm that teachers with high test scores probably improve their students' scores. But it doesn't follow that good teachers succeed because they have a deeper understanding of the subject matter or that they can succeed without the pedagogical skills that teacher training should impart. There's plausibility to the notion that you can't teach what you don't know, but most teachers cover material far less advanced than that distinguishing high from low SAT scorers. It's just as plausible that brighter teachers succeed not only because they have superior content knowledge but also because they can better diagnose learning difficulties; are more flexible in adapting to students' varied learning styles; make more balanced decisions about when to work with students individually, in groups, or in whole classes; and can judge when it makes sense to wait patiently for a child's answer and when to move on. College grads with high SAT scores but not training in pedagogy are unlikely to have these skills. (pp.2-3)

Commitment to training in content as well as in pedagogy needs to be ongoing in our communities of teacher-learners.

Every school can introduce new professional development experiences. The long-term goal must be a redesigned teacher workday which enables genuine teamwork and the informal learning that occurs when teachers spend time each day helping one another plan lessons, critique student work, and solve the common problems of teaching (Sparks & Hirsh, 1997). Providing quality
substitute coverage is one way to assist in this pursuit. Extended training into the classroom by providing extensive coaching and study groups for all teachers could become a reality. Without intensive follow-up, only a small portion of the learning will make its way into everyday practice in classrooms in a way that improves student learning.

A Model

In recent years there has been a growing appreciation for the potential impact of professional development on the overall school structure, not just individual classrooms. There exists an increasing awareness of professional development’s value in advancing school improvement as evidenced in several state and national reports, as well as in research reports on school restructuring initiatives. For example, the 1994 National Education commission on Time and Learning (NECTL) report, Prisoners of Time, indicates that what teachers are expected to know and do has increased in amount and complexity and local, state, and national standards provide further evidence of this phenomena.

Similarly a National Governors' Association report (Corcoran, 1995) notes that systemic reforms place many demands on teachers improving subject-matter knowledge and pedagogical skills; understanding cultural and psychological factors that affect student learning; and assuming greater, and in some cases new responsibilities for curriculum, assessment, outreach, governance, and interagency collaboration. Bull, Buechler, Didley, and Krehbiel (1994), in an Indiana Department of Education report, point out that meeting these demands may be particularly stressful for America’s aging teaching force,
which averages 14.5 years. These teachers, for the most part, received their training at a time when teaching did not routinely require many of the skills that are needed to function effectively in restructured schools of today. Retooling is necessary.

Redefinition of teacher work has led to reconceptualizing professional development and to increased regard for its role, particularly when large-scale systemic reform initiatives are launched (Kentucky Education Association, & Appalachia Educational Laboratory, 1993). Teachers, researchers, and policymakers consistently indicate that the greatest challenge to implementing effective professional development is lack of a major resource, namely, time. Teachers need time to understand new concepts, learn new skills, develop new attitudes, research, discuss, reflect, assess, try new approaches and integrate them into their practice (Cambone, 1995, Corcoran, 1995; Troen & Bolles, 1994; Watts & Castle, 1993). Time is needed to effectively plan one’s own professional development to successfully effectuate personal growth. Cambone (1995) points out that teachers, as adult learners, need both set aside time for formal learning (e.g. workshops and course) and time to experience and process new ideas and ways of working (e.g. practice and reflection).

Effective professional development is ongoing; includes training, practice, and feedback; opportunities for individual reflection and group inquiry into practice and methodology; coaching, mentoring, or other follow-up procedures; is school-based and embedded in teacher work; is collaborative, providing opportunities for teachers to interact with peers; focuses on student learning and
student outcomes, which should, in part, guide assessment of its effectiveness; encourages and supports school-based, teacher and district initiatives; is rooted in the knowledge base for teaching; incorporates constructivist approaches to teaching and learning; recognizes teachers as professionals and adult learners; provides adequate time and follow-up support; and is accessible and inclusive.

The question arises, do typical school schedules support effective professional development programs? Professional development has not been widely seen as an intrinsic part of making teachers more skillful and productive in the classroom (Watts & Castle, 1993); thus, school schedules do not normally incorporate time to consult or observe colleagues or engage in professional activities such as research, learning and practicing new skills, curriculum development, or professional reading. However, schools (especially middle schools) in New Jersey are building team-planning time into their daily school schedules as a mechanism to begin to effectuate change. Typically, administrators, parents, boards of education, legislators, and taxpayers view unfavorably anything that draws teachers away from direct engagement with students. Indeed, teachers themselves often feel guilty about being away from their classrooms for restructuring or staff development activities (Cambone, 1995; Raywid, 1993).

Today's culture does not place a premium on teacher learning and professional development needs unless practices are linked to student outcomes. Accountability is on the rise and so too is struggling against the constraints preventing a climate that is more welcoming to teacher learning. Time
has emerged as the key issue in every analysis of school change appearing in the last decade (Fullan & Miles, 1992).

Referenced in a critical issue research paper, Cook (1997) notes that former American Federation of Teachers President Al Shanker (1993) pointed out that Saturn automobile company employees spend 5% (92 hours a year) of their work time learning:

Imagine what a training program like this would do for people trying to restructure their schools. Or, put another way, imagine trying to change things as basic as the culture of a school with a couple of days of in-service training a year and some hours stolen from class preparation periods. If it takes 600 courses [a central training group offers nearly 600 different courses] and 92 hours a year per employee to make a better automobile, it will take that and more to make better schools. And if we're not willing to commit ourselves to that kind of effort, we are not going to get what we want. (Cook, 1997, Critical Issue: Finding time for professional development)

Community support is essential for creating the professional development opportunities teachers require to help all of their students reach higher levels of learning. Parents and community members must understand that professional development is the linchpin for any reform efforts not an addition to them. Parents and other stakeholders must be kept informed of the value of professional time as it relates to their child's achievement. Practicing teachers face several barriers in accessing adequate professional development programs.
Obstacles include: lack of funding, shortage of time, competing demands, and for many, securing quality substitute coverage.

Professional Teaching Standards

A number of organizations have proposed standards for teachers' professional development. Some policymakers and practitioners have come up with new approaches that are promising. Among them is the goal to embed professional development in the workplace so it is more closely related to teachers' work experience. Teachers should have access to their colleagues and be encouraged to share, discuss, and reflect on their practice. Time must be provided for these collegial activities.

The CPRE Policy Brief entitled: *Helping Teachers Teach Well: Transforming Professional Development* (1995) provides the following framework for reviewing Professional Development policies and practices:

1. How is professional development defined by teachers, district administrators, state officials, and legislators? How is it defined in collective bargaining agreements and in law and regulation?
2. What growth opportunities are being provided for teachers?
3. What are the incentives for teachers to participate in professional development and improve their practice?
4. Who sponsors and provides formal professional development?
5. What is known about the effects of existing policies and programs?
6. How is professional development planned and coordinated?
7. What is regarded as "good practice" in professional development?
8. How is professional development funded?

9. How is professional development linked to the improvement of teaching and to the changes in standards, curriculum, and assessment envisioned by systemic reform?

10. To what extent are current activities consistent with principles for effective professional development? (pp. 1-3)

As districts craft district professional development plans cognizant of the above guidelines, careful attention to the issue of the availability of quality substitutes must also be given.

Faculty and other adults in the school also have needs for achievement and recognition. Since adults in the school are vested with the responsibility to create opportunities for student achievement and recognition, it makes common sense that they must deal with their own needs for the same things before they can be of much use to children. As cited in Wald & Castleberry (2000), Nobel Prize Loureate recipient Rabindranath Tragore eloquently stated, “A teacher can never truly teach unless she is learning herself. A lamp can never light another flame unless it continues to burn its own flame” (Wald & Castleberry, 2000, p. 3).

The culture of schools, often fosters isolation and individualism, not cooperation and collaboration. To learn the most, to grow in knowledge and wisdom, people must feel free to explore, to take risks, to challenge their own ideas and those of others in a threat-free environment, to sometimes wander aimlessly in a world of confusion searching for a meaning that will give focus and
direction to the content of learning. To seek with others the multiple realities of truth is what scholarship and learning truly are about. In a school where concern for learning and change dominates the vision and the daily reality of school life, people see learning as a journey taken together in a climate that supports risk taking. This kind of school does not see learning as an arrival point predetermined by others, for others. Instead, the school arranges itself so that learning needs are met; people feel free from threat; passion for learning of all people is encouraged; honest communication through supportive dialogue links people in common, aligned goals; and all people feel included through the expectation of cooperative and collaborative work.

Three powerful ideas are currently altering the shape of schools in the United States and the staff development that occurs with them. These ideas are results-driven education, systems thinking, and constructivism. Results-driven education represents a dramatic shift in thinking regarding the purpose of schools and what we expect of students; and in a logical progression; results-driven education for students requires results-driven staff development for educators. It has become increasingly clear, however, that a seat-time view of staff development is incongruous with a results-driven educational system.

Systems thinking, has been described by Senge as “a discipline for seeing wholes. It is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static ‘snapshots’ “ (Senge, 1990, p. 69). Systems thinking has two important implications for staff development. First, staff development must help install systems thinking at all levels within the
organization so that school board members, superintendents, and other central office administrators, principals, teachers, and students understand the nature and power of systems to shape events. Second, educational leaders must understand the limitations of staff development that is divorced from a systems perspective and appreciate the central role of staff development within systemic change efforts.

The third powerful educational idea is constructivism. Constructivists believe that learners create their own knowledge structures rather than merely receive them from others. The implications of constructivism for staff development are thus profound and quite direct: constructivist classrooms cannot be created through transmittal forms of staff development. Staff development must model constructivist practices for teachers if those teachers are expected to be convinced of the validity of those practices and to understand them sufficiently well to make them an integrated part of their classroom repertoires. Staff development from a constructivist perspective will include activities such as action research, conversations with peers about the beliefs and assumptions that guide their instruction, and reflective practices such as journal keeping-activities that many educators themselves may not even view as staff development. Results-driven education, systems thinking, and constructivism are producing profound changes in how staff development is conceived and implemented. The paradigm shifts are:

1. from individual development to individual development and organization development
2. from fragmented, piecemeal improvement efforts to staff development
driven by a clear, coherent strategic plan for the school district, each school, and
the departments that serve schools
3. from district-focused to school-focused approaches to staff development
4. from a focus on adult needs and satisfaction to a focus on student needs
and learning outcomes, and changes in on-the-job behaviors
5. from training conducted away from the job as the primary delivery system
for staff development to multiple forms of job-embedded learning
6. from an orientation toward the transmission of knowledge and skills to
teachers by “experts” to the study by teachers of the teaching and learning
processes
7. from a focus on generic instructional skills to a combination of generic and
content-specific skills
8. from staff developers who function primarily as trainers to those who
provide consultation, planning, and facilitation services as well as training
9. from staff development provided by one or two departments to staff
development as a critical function and major responsibility performed by all
administrators and teacher leaders
10. from staff development directed toward teachers as the primary recipients
to continuous improvement in performance for everyone who affects student
learning
11. from staff development as a "frill" that can be cut during difficult financial times to staff development as an indispensable process without which schools cannot hope to prepare young people for citizenship and productive employment.

The shifts are significant and powerful. They are essential to the creation of learning communities in which everyone-students, teachers, principals, and support staff-are both learners and teachers. All of the things described above will serve to unleash the most powerful source of success for all students—the daily presence of adults who are passionately committed to their own lifelong learning within an organization that are continually renewing themselves.

Outcomes

Frattaroli states:

It is most satisfying to demonstrate the link between professional development and student outcomes. The investment in quality teaching is the most important investment we can make. All educators need the opportunity for continuous improvement. I believe professional development will be the major educational issue of the 21st century. (as cited in Sparks & Hirsch, 1997, p. 51)

In his classic study of the sociology of teaching, Lortie states:

For most teachers, learning by experience has been a matter of learning alone, an exercise in unguided trial and error. As we approach an era in which we will need vast numbers of new teachers and quality substitute teaches, shouldn't we think about creating environments that will help
these teachers, as well as their students, continue to grow and learn? (as cited in Scherer, 1999, p.208)

As summarized by Guskey & Huberman (1995):

In the case of teachers, nearly all are confident and highly optimistic when they first enter the classroom. But within a relatively short time the unforeseen physical and emotional demands of teaching begin to take their toll. During their first two years of teaching, most beginning teachers experience a severe decline in their hopefulness and enthusiasm. They become increasingly pessimistic about their impact on students and more cynical about the effectiveness of the educational process. Oddly, these sobering figures go largely unnoticed. (p. 114)

Creating a professional learning community in our schools relies on securing, nourishing, and maintaining a viable quality substitute pool. Although we state publicly that we want to create educational environments that contribute to better outcomes for students, we do not widely provide the resources needed for retooling. Recognition of the impact of quality substitute availability on the implementation of professional development programs is the first step.

New Jersey Study

In New Jersey we are currently experiencing a shortage of classroom teachers and in turn a shortage of quality substitute teachers. Concurrently, we have embarked as a state, into a new 100-hour professional development initiative. This New Vision for Professional Development is intended to provide flexibility and guidance to insure credibility for meaningful professional
development through a variety of ongoing and supported district activities. The genesis for planning should be a balance of the varieties of professional development opportunities that produce a valuable experience for the participant and culminate in enhanced student learning. Action research, independent study, internships, teacher exchanges, study groups, mentorships, and collaborative team teaching are just a few of the activities that can be designed so that individuals can create a plan that is unique to their specific needs, and at the same time are aligned to school and district goals. Ongoing support often requires the dependence on quality substitute teachers to ensure implementation of professional development plans.
CHAPTER III
RESEARCH DESIGN

Introduction

A national survey conducted by Jim Dorward, Amber Hawkins, and Geoffrey G. Smith at Utah State University produced results that indicate that availability of quality substitute teachers is problematic, and appears to vary by region, district per-pupil expenditure, type of community, student enrollment, and associated full-time equivalent (FTE) staffing ratio. The results also indicate that district administrators consider substitute availability a more serious problem when teacher professional development is jeopardized (Dorward, Hawkins, & Smith, 2000).

These researchers used a stratified random sample of 500 school districts identified from the 1994-95 Schools and Staffing Survey conducted by the National Center for Education statistics (U.S. Department of Education 1997). The population of their database consisted of 14,400 school districts. The purpose of the stratification was to identify a representative sampling of districts based on four geographic regions (Northeast, Southeast, Central, and West) and five percentile ranks of district student enrollment (10th percentile, 25th percentile, 50th percentile, 75th percentile, and 90th percentile). Through a combination of mail and telephone surveys the researchers reported 393 (78.6 percent) useable
data sets. A researcher-developed survey was designed to describe demographic data that could be correlated with specific characteristics of substitute teacher training. Survey questions were based on similar questions from an earlier survey of substitute coordinators in Ohio (Griswold, & Hughes 2000), input from district administrators, and experts on substitute teaching from the Substitute Teaching Institute (STI) at Utah State University.

Sample

For the purpose of this study a proportional random sample of the 573 public school districts identified in the December 1999 State Summary of Elementary School Proficiency Assessment (ESPA) were surveyed. The indicator of the District Factor Group (DFG) of the socioeconomic status of citizens in each district was used for comparative reporting. The DFG designations were updated in 1992 using the following demographic variables from the 1990 United States Census.

1. Percent of adult residents who failed to complete high school
2. Percent of adult residents who attended college
3. Occupational status of adult household members
4. Population density
5. Income
6. Unemployment
7. Poverty

The variables were combined using a statistical technique called principal components analysis, which resulted in a single measure of socioeconomic status for each district. Districts were then ranked according to their score on this
measure and divided into eight groups based on the score interval in which their scores were located. Eight DFGs have been created based on the 1990 United States Census data. They range from A (lowest socioeconomic districts) to J (highest socioeconomic districts) and are labeled as follows: A, B, CD, DE, FG, GH, I, J. Updating the DFGs has not changed any district's designation as Special Needs or Not Special Needs.

Whereas the DFGs based on the 1980 United States Census resulted in 10 groups containing approximately equal numbers of districts, the DFGs based on the 1990 United States Census resulted in eight groups of different sizes depending on their score. The number of districts* in each DFG and the sample-size drawn is indicated in Figure 1.

<table>
<thead>
<tr>
<th>DFG</th>
<th>Number of Districts</th>
<th>Proportional Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>35</td>
<td>16</td>
</tr>
<tr>
<td>B</td>
<td>78</td>
<td>34</td>
</tr>
<tr>
<td>CD</td>
<td>75</td>
<td>32</td>
</tr>
<tr>
<td>DE</td>
<td>100</td>
<td>43</td>
</tr>
<tr>
<td>FG</td>
<td>87</td>
<td>38</td>
</tr>
<tr>
<td>GH</td>
<td>78</td>
<td>34</td>
</tr>
<tr>
<td>I</td>
<td>105</td>
<td>45</td>
</tr>
<tr>
<td>J</td>
<td>15</td>
<td>8</td>
</tr>
</tbody>
</table>

Total N= 573 N= 250

Figure 1. District Factor Group. Includes all New Jersey's public school districts (regardless of school configuration or grade levels served; does not include Charter schools).
Surveys were mailed to chief school administrators of the targeted random proportional sample of New Jersey public school districts in April 2001. A positive response within two weeks of the initial mailing yielded 170 usable data sets. A sixty-eight percent response rate was realized without follow-up action. The frequency distribution by DFG of the respondents is cited in Table 1.

Table 1

New Jersey Useable Data Sets of Respondents

<table>
<thead>
<tr>
<th>DFG</th>
<th>Response Frequency</th>
<th>Percent of Respondent Population</th>
<th>Number of Responses /Number Mailed</th>
<th>Percent of Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>12</td>
<td>7.1</td>
<td>12/16</td>
<td>75.0</td>
</tr>
<tr>
<td>B</td>
<td>22</td>
<td>12.9</td>
<td>22/34</td>
<td>64.7</td>
</tr>
<tr>
<td>CD</td>
<td>25</td>
<td>14.7</td>
<td>25/32</td>
<td>78.1</td>
</tr>
<tr>
<td>DE</td>
<td>29</td>
<td>17.1</td>
<td>29/43</td>
<td>67.4</td>
</tr>
<tr>
<td>FG</td>
<td>25</td>
<td>14.7</td>
<td>25/38</td>
<td>66.6</td>
</tr>
<tr>
<td>GH</td>
<td>26</td>
<td>15.3</td>
<td>26/34</td>
<td>76.5</td>
</tr>
<tr>
<td>I</td>
<td>24</td>
<td>14.1</td>
<td>24/45</td>
<td>53.3</td>
</tr>
<tr>
<td>J</td>
<td>7</td>
<td>4.1</td>
<td>7/8</td>
<td>87.5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>170</td>
<td>100.0</td>
<td>170/250</td>
<td>68.0</td>
</tr>
</tbody>
</table>

Instrumentation

A researcher-developed survey was designed to describe demographic data that could be correlated with specific characteristics of substitute teacher training as well as to DFGs as previously mentioned. Survey questions were based on the national study (Dorward, Hawkins, & Smith, 2000), input from district administrators, and experts and colleagues throughout the state of New Jersey experiencing the difficulties of implementing quality professional development components. A copy of the instrument is included in Appendix A.
Responses to some variables were collapsed or eliminated from analysis to enable sufficient values in crosstab cells. For example, for crosstabulation associated with availability of substitute teachers, the six response variables were collapsed to obtain the three variables reported in the results. Respondents who indicated substitute availability was "sometimes a problem" or "sometimes a serious problem" were grouped and reported as "a problem". Similarly, respondents who indicated substitute availability was "a very serious problem" or "sometimes a very serious problem" were combined with those responding it was "a serious problem". These changes, combined with missing values associated with some variables, explain combined sample totals of less than 170 in some analyses.

Certain questions on the research instrument relate to the research questions posed. The following is a delineation of those relationships. The data obtained from items 2, 7, and 10 were used to address the first research question regarding how districts in New Jersey rate the quality of their substitutes. The subsidiary questions addressing educational requirements and the required processes for employment were addressed using survey items 12, 13, and 14. The second research question focusing on the issue of availability was addressed using data obtained from item 8. The subsidiary question examining recruitment procedures utilized information secured from item 9 and the second subsidiary question researching the relationship of availability to selected demographic characteristics relied on the data obtained from items 1, 2, 3, 5, and 7.

To examine how quality and availability factors of substitutes are related, if at all, data obtained from items 8 and 10 were used. Data obtained from survey item
11 was used to study the fourth issue of this dissertation study, namely, pay of substitutes in the state of New Jersey. Survey items 2, 3, 5, 7, and 11 also provided the data needed to address the subsidiary questions of how daily substitute pay rates relate to selected demographic characteristics. The fifth research question, examining the degree to which teacher participation in school improvement and professional development activities has been jeopardized by the lack of substitute teachers was studied using data obtained from item 16. Subsidiary questions focusing on the form of professional development, the dependency on quality substitutes, the 100-hour initiative, professional development program designs, and influences of DFG and community type were addressed using additional data secured from items 2, 7, 8, 10, 17, 18, 19, 20, and 21.

Data obtained from item 15 extended this study to include information regarding the extent of usage of permanent substitutes in the school districts in New Jersey.

Data Collection

The subjects in this study were Chief School Administrators or their designees in public schools in the state of New Jersey. The directory of Chief School Administrators was obtained from the home page from the State of New Jersey Department of Education. The survey instrument (see Appendix A) was modified with permission (see Appendix C), from the instruments used by Dorward, Hawkins, and Smith in their national study. The proportional random sample (based on DFG's) of participants received a letter of introduction (see Appendix B) on April 4, 2001. Using the state’s DFG (District Factor Group) approximately two-fifths of the districts in each DFG were asked to participate in the study. The letter of
introduction explained the purpose and anticipated benefits and risks of the study. All participants were assured confidentiality by deletion of any reference to their name after their response was received. Confidentiality was assured. Within two weeks of the initial survey mailing, 170 responses were received, representing a 68% response rate, thereby eradicating the need to conduct a telephone follow-up survey request.

Data Analysis

It was this researcher's intent to replicate in the state of New Jersey, with minor modifications, the earlier national survey for the purpose of identifying availability of quality substitute teachers, daily pay rates for substitutes, and possible effects on teacher professional development in light of our new state mandate of 100 hours for maintaining teaching certification. This study specifically addressed the following questions:

1. How do districts in New Jersey rate the quality of their substitute teachers?

   Subsidiary questions:
   a) What are the educational requirements for employment as a substitute teacher?
   b) What are the required processes for hiring substitute teachers?

2. To what degree is substitute teacher availability a problem at the state level?

   Subsidiary questions:
   a) What are the recruitment procedures used by most districts?
   b) How is quality substitute availability related to selected demographic characteristics of a district, such as: DFG? community type? enrollment
size? per pupil expenditure? Percent of students eligible for free or reduced lunch?

3. How are quality and availability factors of substitutes related?

4. What is the pay for substitute teachers?
   
   Subsidiary question:
   
   a) To what degree is substitute pay related to selected demographic characteristics of a district, such as: DFG? community type? enrollment size? per pupil expenditure? Percent of students eligible for free or reduced lunch?

   Recognizing that there is a dependency on a viable pool of quality substitutes to successfully plan and implement both professional development programs and implement targeted curricula expectations and designs when regular teachers are absent from their classes, this study also examines the issue:

5. To what degree has teacher participation in school improvement and professional development activities been jeopardized by the lack of substitute teachers?

   Subsidiary questions:
   
   a) What form are district professional development programs taking in the state?

   b) What percent of professional development opportunities are dependent on quality substitute availability?

   c) Is the new state 100-hour initiative impacting district need for substitute coverage?
d) If quality substitutes were readily available would professional development program designs be altered?

e) To what degree do DFG and community type influence the impact ascertained?

This research design includes descriptive analysis of data from a proportional random sample of public school districts in the state of New Jersey. In addition to descriptive analyses, the research questions lend themselves to analysis of association, in particular, Chi-square analysis to determine interrelationships among stated variables. For example, Pearson Chi-square tests established an association between a district's district factor group (DFG) status and their perceived quality of substitutes as signified by quality ratings or an association between a district's community type and their quality rating. Standardized residuals are reported when significant chi-square values were found. These residuals allow us to identify the categories that are making a significant contribution to the significant chi-square value. Following Haberman's guideline, we infer that where the standardized residual for a category is greater than 2, that that category is strongly contributing to the significant chi-square value (Haberman, 1984).

Constraints and Limitations

This study was meant to provide state and local administrators and policy makers with a state perspective on issues related to substitute teaching in public education. Of particular interest, is the impact that availability of quality substitutes is having on the design and implementation of our district professional development plans and programs. Several design and implementation constraints may affect
generalizability. Proportional random sampling was based on the state defined DFGs. Despite concerted efforts to obtain data from selected districts, the response rate was 68 percent. This rate, while quite sufficient, suggests the possibility of nonresponse bias. In addition, recognition that there are many other variables contributing to the effectiveness of professional development models and programs, one must recognize that the variable of quality substitute availability is only one of many.

Another plausible limitation of this study is the lack of clarity offered to respondents regarding what "quality" means. Nowhere on the survey instrument was "quality" defined for the respondents. People responding may have operated with different notions or assumptions. This suggests a possibility of variance in the operational definition of "quality."

An additional limitation, although this study was meant to be a replication study, this researcher looked at only some of the variables considered in the original study. Therefore, the study replication value can only be measured in so far as the New Jersey results are consistent with the original study.
CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Responses to the survey entitled "Substitute Impact Study" provided data from New Jersey school districts about the availability and quality of substitute teachers, daily pay rates for substitutes, and possible effects on teacher professional development. These data are presented and analyzed in this chapter in relation to the targeted research questions developed.

One hundred seventy of the 250 districts that received surveys returned them, yielding a response rate of 68 percent. District superintendents comprised 53.5 percent of the respondents. Assistant superintendents, curriculum coordinators, staff developers and school principals were also among the respondent group.

Quality Rating of Substitute Teachers

The purpose of the first research question was to determine how districts in New Jersey rate the quality of their substitute teachers. In answering this question a frequency distribution was tabulated. Thirty-two percent of the respondents stated that the quality of substitute teachers in their districts is "above average", 62 percent stated the quality is "average" and 6 percent stated the quality is "poor" as presented in Table 2.
Table 2

Quality of Substitute Teachers in the State of New Jersey

<table>
<thead>
<tr>
<th>Rating</th>
<th>Frequency</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above average</td>
<td>54</td>
<td>32.1</td>
</tr>
<tr>
<td>Average</td>
<td>104</td>
<td>61.9</td>
</tr>
<tr>
<td>Poor</td>
<td>10</td>
<td>6.0</td>
</tr>
<tr>
<td>Total</td>
<td>168</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The above findings indicate that 94 percent of the responding school district personnel state that the quality of existing substitute teachers is either "average" or "above average" signifying that the quality is considered to be adequate.

The entries provided in the crosstabulation presented in Table 3, lead to significant findings between the relationship of a district's DFG status and the quality ratings stated by respondents.
<table>
<thead>
<tr>
<th>DFG</th>
<th>Quality</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>poor</td>
<td>average</td>
<td>above average</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>33.3%</td>
<td>41.7%</td>
<td>25.0%</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Std. Residual</td>
<td>-.9</td>
<td>-.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>4.8%</td>
<td>81.0%</td>
<td>14.3%</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Std. Residual</td>
<td>-.2</td>
<td>1.1</td>
<td>-1.4</td>
<td></td>
</tr>
<tr>
<td>CD</td>
<td>4.0%</td>
<td>44.0%</td>
<td>52.0%</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Std. Residual</td>
<td>-.4</td>
<td>-1.1</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td>DE</td>
<td>3.6%</td>
<td>64.3%</td>
<td>32.1%</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Std. Residual</td>
<td>-.5</td>
<td>.2</td>
<td>.0</td>
<td></td>
</tr>
<tr>
<td>FG</td>
<td>4.0%</td>
<td>52.0%</td>
<td>44.0%</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Std. Residual</td>
<td>-.4</td>
<td>-.6</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>GH</td>
<td>3.8%</td>
<td>73.1%</td>
<td>23.1%</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Std. Residual</td>
<td>-.4</td>
<td>.7</td>
<td>-.8</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>4.2%</td>
<td>70.8%</td>
<td>25.0%</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Std. Residual</td>
<td>-.4</td>
<td>.6</td>
<td>-.6</td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>.0%</td>
<td>57.1%</td>
<td>42.9%</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Std. Residual</td>
<td>-.6</td>
<td>-.2</td>
<td>.5</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6.0%</td>
<td>61.9%</td>
<td>32.1%</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

Note. Pearson Chi-square = 28.830, significant at the .011 level (2-sided).

An analysis of data in Table 3 as represented by a Chi-square value of 28.820 is significant at the .011 level and suggests that there is an association between DFG and perceived quality of substitutes as signified by quality ratings. In examining the data across DFG’s, the largest percentage of a given DFG categorizing their substitutes as “above average” are found in CD districts (districts that rank third from the bottom of the socio-economic ranking in the state).
Specifically, 52 percent of the respondents in CD districts rated the quality of their substitute teachers as being "above average". Similarly, the greatest percentage of respondents of a given DFG categorizing their substitutes as "poor" is found in A districts (districts at the bottom of the socio-economic ranking in the state). Specifically, 33.3 percent of respondents in A districts rated their substitute quality as "poor".

Using Haberman’s (1984) guidelines of standardized residuals of value of 2, one can identify the categories that are contributing to the significant chi-square value. Based on the reported finding of a 3.9 standardized residual for poor districts, school districts being in DFG A category are more likely to indicate that the quality of their substitutes is "poor". Conversely the standardized residual of 1.8 for CD districts indicates that these districts are more likely to rate the quality of their substitutes as "above average".

Additional crosstabulation statistics yield significant findings between the relationship of a district’s community type classification and the quality ratings stated as revealed in Table 4.

The significant Chi-square value of 17.594 at the .007 level implies that there is an association between community type and the quality of the substitute pool. Fifty-seven percent of respondents in rural districts are reporting that the quality of their substitutes is "above average" while 16.7 percent of the respondents in small cities are classifying the quality of their substitutes as "poor".
Table 5

Educational Requirements and Hiring Requirements for Substitute Teachers in the State of New Jersey

<table>
<thead>
<tr>
<th>EDUCATIONAL REQUIREMENTS</th>
<th>YES</th>
<th>NO</th>
<th>Total Number of Districts Responding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular teacher state certification</td>
<td>11.2%</td>
<td>88.2%</td>
<td>169</td>
</tr>
<tr>
<td>Completion of district training</td>
<td>5.3%</td>
<td>94.7%</td>
<td>169</td>
</tr>
<tr>
<td>4-year college diploma</td>
<td>8.3%</td>
<td>91.7%</td>
<td>169</td>
</tr>
<tr>
<td>Some college</td>
<td>82.2%</td>
<td>17.8%</td>
<td>169</td>
</tr>
<tr>
<td>Other educational requirements</td>
<td>25.4%</td>
<td>74.6%</td>
<td>169</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HIRING REQUIREMENTS</th>
<th>YES</th>
<th>NO</th>
<th>Total Number of Districts Responding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>98.2%</td>
<td>1.8%</td>
<td>167</td>
</tr>
<tr>
<td>Interview</td>
<td>78.1%</td>
<td>21.9%</td>
<td>169</td>
</tr>
<tr>
<td>Reference check</td>
<td>68.2%</td>
<td>31.8%</td>
<td>168</td>
</tr>
<tr>
<td>Criminal background check</td>
<td>96.8%</td>
<td>1.2%</td>
<td>168</td>
</tr>
<tr>
<td>Completion of district orientation</td>
<td>28.8%</td>
<td>71.2%</td>
<td>169</td>
</tr>
<tr>
<td>Completion of teaching skills training</td>
<td>1.8%</td>
<td>98.2%</td>
<td>170</td>
</tr>
<tr>
<td>Participation in on-going professional development opportunities</td>
<td>4.7%</td>
<td>95.3%</td>
<td>170</td>
</tr>
<tr>
<td>Other hiring requirements</td>
<td>5.9%</td>
<td>94.1%</td>
<td>170</td>
</tr>
</tbody>
</table>

The requirements for employment statewide are interesting in light of the previously reported findings on the quality of New Jersey substitute teachers.

Regarding educational requirements, most of the substitutes are not required to be certified teachers, as reported by 88.2 percent of the districts; most have not
received formal district training 94.7 percent reported, and 91.7 percent report that their candidates do not need to have four years of college completed. Many of the respondents noting “other educational requirements” referenced the need for substitute teacher certification issued by the county superintendents office as the requirement.

In regard to hiring requirements, 71.2 percent of the responding districts report that they have no formal orientation program; 98.2 percent report no required teaching skills training; 95.3 percent report that substitutes do not participate in ongoing district professional development opportunities; 31.8 percent report that reference checks are not completed, 21.9 percent report that interviews are not conducted and 1.2 percent report that criminal checks are not completed. As in the case of educational requirements so too for hiring requirements, respondents reporting “other”, referenced the need for substitute teacher certification issued by the county superintendents office as the requirement.

Further examination of the stated responses, although not presented in the tables provided, reveals that 72.4 percent of districts responding do not use permanent substitutes. Using crosstabulation analyses, no significant associations were found between how the respondents rated the quality of their substitutes and educational requirements and hiring.

Substitute Teacher Availability at the State Level

The preceding analysis focused on the quality of substitute teachers in the state of New Jersey. The second research question focuses on the issue of availability. The issue of availability however is not as promising as that of perceived
quality. It has been suggested by current literature that fewer people willing to substitute at the same time that more substitutes are needed characterize the situation regarding substitute teacher supply. In answering this question a frequency distribution was tabulated.

Results from this dissertation study support what the literature as well as the findings of the national study of Dorward, Hawkins, and Smith (2000) which indicated about the shortage of substitute teachers: For example, in their Summer 2000 article, Dorward, Hawkins, and Smith reported that personnel in 86.1 percent of districts surveyed indicated that the availability of quality substitute teachers is problematic. Specifically they found that of these, 12.9 percent saw the availability of substitute teachers as "a problem," and 56.3 percent saw it as "a serious problem" (p.40). The results from this dissertation study are presented in Table 6.

Table 6
Availability of Substitute Teachers in the State of New Jersey

<table>
<thead>
<tr>
<th>Rating</th>
<th>Frequency</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A serious problem</td>
<td>69</td>
<td>40.8</td>
</tr>
<tr>
<td>A problem</td>
<td>95</td>
<td>56.2</td>
</tr>
<tr>
<td>Little or No problem</td>
<td>5</td>
<td>3.0</td>
</tr>
<tr>
<td>Total</td>
<td>168</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Of particular import, personnel in 97 percent of the responding districts surveyed in New Jersey, indicate that the availability of quality substitute teachers is problematic. Of these, 56.2 percent saw the availability of substitute teachers as "a problem" and 40.8 percent saw the availability of quality substitutes as "a serious problem".
Support of Availability

The purpose of the first subsidiary question was to determine the recruitment procedures most often used by reporting New Jersey districts. Frequency distributions were calculated. The findings are reported in Table 7.

Table 7
Top Substitute Recruitment Methods in the State of New Jersey

<table>
<thead>
<tr>
<th>Method</th>
<th>YES</th>
<th>NO</th>
<th>Total Number of Districts Responding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apply on own</td>
<td>62.4%</td>
<td>37.6%</td>
<td>170</td>
</tr>
<tr>
<td>Local advertisement</td>
<td>72.9%</td>
<td>27.1%</td>
<td>170</td>
</tr>
<tr>
<td>Placement office</td>
<td>5.9%</td>
<td>94.1%</td>
<td>170</td>
</tr>
<tr>
<td>School Newsletters</td>
<td>15.3%</td>
<td>84.7%</td>
<td>170</td>
</tr>
<tr>
<td>Word-of-mouth</td>
<td>27.1%</td>
<td>72.9%</td>
<td>170</td>
</tr>
<tr>
<td>Flyers/Notices</td>
<td>10.6%</td>
<td>89.4%</td>
<td>170</td>
</tr>
<tr>
<td>PTO</td>
<td>1.8%</td>
<td>98.2%</td>
<td>170</td>
</tr>
<tr>
<td>Other</td>
<td>8.2%</td>
<td>91.2%</td>
<td>170</td>
</tr>
</tbody>
</table>

It should be noted that certain recruitment methods are not being utilized to a large degree, as reported by the responding districts. In 94.1% of the responding districts placement offices were not being utilized, school newsletters were not being used in 84.7% of the districts, and in 98.2% of the districts the PTO was not being utilized.

As reported, local advertisement, applicant's initiative, and word-of-mouth are the primary contributors to securing an applicant pool of substitutes. Candidates are responding to local advertisements in 72.9% of the reporting districts, applying on
their own in 62.4% of the districts, and responding to word-of-mouth solicitation in
27.1% of the districts.

The second subsidiary question focused on determining the relationship
between quality substitute availability and selected demographic characteristics of
school districts. Crosstabulation statistic reports were run to determine if there are
any significant relationships. Concern over availability of quality substitute teachers
does not appear to vary by district factor group, type of community, per pupil
expenditure, student enrollment nor percent of students on free or reduced lunch
programs as presented in Tables 8 through 12. Chi-square values were not found
to be significant.

In spite of the small number of responding districts from A and J, district
factor groups, the concern of availability is seen as a problem by all districts to
include those with greater number of respondents (see Table 8).
Table 8
Crosstabulation of DFG and Availability Ratings in New Jersey

<table>
<thead>
<tr>
<th>DFG</th>
<th>SERIOUS</th>
<th>PROBLEM</th>
<th>LITTLE OR NO</th>
<th>TOTAL(N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>63.6%</td>
<td>36.4%</td>
<td>0.0%</td>
<td>11</td>
</tr>
<tr>
<td>B</td>
<td>45.5%</td>
<td>54.5%</td>
<td>0.0%</td>
<td>22</td>
</tr>
<tr>
<td>CD</td>
<td>36.0%</td>
<td>64.0%</td>
<td>0.0%</td>
<td>25</td>
</tr>
<tr>
<td>DE</td>
<td>44.8%</td>
<td>55.2%</td>
<td>0.0%</td>
<td>29</td>
</tr>
<tr>
<td>FG</td>
<td>32.0%</td>
<td>64.0%</td>
<td>4.0%</td>
<td>25</td>
</tr>
<tr>
<td>GH</td>
<td>38.5%</td>
<td>53.8%</td>
<td>7.7%</td>
<td>26</td>
</tr>
<tr>
<td>I</td>
<td>37.5%</td>
<td>54.2%</td>
<td>8.3%</td>
<td>24</td>
</tr>
<tr>
<td>J</td>
<td>42.9%</td>
<td>57.1%</td>
<td>0.0%</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>40.8%</td>
<td>56.2%</td>
<td>3.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note. N=NUMBER OF RESPONDENTS =169

Of the districts responding, urban districts lead other community types in the percentage of their districts reporting that availability is "a serious problem". However, once again 97% of all respondents are reporting availability as a problem as presented in Table 9.
Table 9
Crosstabiluation of Community Type and Availability Ratings in New Jersey

<table>
<thead>
<tr>
<th>COMMUNITY TYPE</th>
<th>AVAILABILITY RATINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SERIOUS</td>
</tr>
<tr>
<td>Rural</td>
<td>37.1%</td>
</tr>
<tr>
<td>Small city &lt;5000</td>
<td>50.0%</td>
</tr>
<tr>
<td>Suburban</td>
<td>38.2%</td>
</tr>
<tr>
<td>Urban</td>
<td>55.0%</td>
</tr>
<tr>
<td>Total</td>
<td>40.8%</td>
</tr>
</tbody>
</table>

Note. N=NUMBER OF RESPONDENTS =169

Although the number of respondents is small for those districts whose per pupil expenditure is <$4000, this group reports the greatest percent of their respondents categorizing substitute availability as “serious” as revealed in Table 10. However, once again 97% of all respondents are reporting availability as a problem.
<table>
<thead>
<tr>
<th>Per Pupil expenditure</th>
<th>SERIOUS</th>
<th>PROBLEM</th>
<th>LITTLE OR NO</th>
<th>TOTAL(N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$4000</td>
<td>50.0%</td>
<td>50.0%</td>
<td>0.0%</td>
<td>2</td>
</tr>
<tr>
<td>$4000-5999</td>
<td>20.0%</td>
<td>80.0%</td>
<td>0.0%</td>
<td>5</td>
</tr>
<tr>
<td>$6000-6999</td>
<td>43.5%</td>
<td>56.5%</td>
<td>0.0%</td>
<td>23</td>
</tr>
<tr>
<td>$7000-8999</td>
<td>40.7%</td>
<td>53.1%</td>
<td>6.2%</td>
<td>81</td>
</tr>
<tr>
<td>$9000 or &gt;</td>
<td>38.9%</td>
<td>61.1%</td>
<td>0.0%</td>
<td>54</td>
</tr>
<tr>
<td>Total</td>
<td>40.0%</td>
<td>57.0%</td>
<td>3.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note. N=NUMBER OF RESPONDENTS = 185

Of the districts responding, large districts with student enrollments of 5000 or greater, report the greatest percent of their respondents as categorizing substitute availability as “serious” as presented in Table 11. However, once again 97% of all respondents are reporting availability as a problem.
Table 11
Crosstabulation of Student Enrollment and Availability Ratings in New Jersey

<table>
<thead>
<tr>
<th>Student enrollment</th>
<th>SERIOUS</th>
<th>PROBLEM</th>
<th>LITTLE OR NO</th>
<th>TOTAL(N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 300</td>
<td>31.3%</td>
<td>62.5%</td>
<td>6.3%</td>
<td>16</td>
</tr>
<tr>
<td>300-999</td>
<td>38.2%</td>
<td>60.0%</td>
<td>1.8%</td>
<td>55</td>
</tr>
<tr>
<td>1000-1999</td>
<td>48.8%</td>
<td>51.2%</td>
<td>0.0%</td>
<td>43</td>
</tr>
<tr>
<td>2000-2999</td>
<td>25.0%</td>
<td>68.8%</td>
<td>6.3%</td>
<td>16</td>
</tr>
<tr>
<td>3000-4999</td>
<td>37.5%</td>
<td>50.0%</td>
<td>12.5%</td>
<td>16</td>
</tr>
<tr>
<td>5000 or &gt;</td>
<td>52.2%</td>
<td>47.8%</td>
<td>0.0%</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>40.8%</td>
<td>56.2%</td>
<td>3.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note. N=NUMBER OF RESPONDENTS =169

Although the number of respondents is small for those districts whose percent of students eligible for reduced or free lunch is 70% or greater, this group reports the greatest percent of their respondents as categorizing substitute availability as “serious” as presented in Table 12. However, once again 97% of all respondents are reporting availability as a problem.
Table 12
Crosstabulation of Percent Eligible for Reduced or Free Lunch and Availability Ratings in New Jersey

<table>
<thead>
<tr>
<th>%Eligible for Reduced or Free Lunch</th>
<th>SERIOUS</th>
<th>PROBLEM</th>
<th>LITTLE OR NO</th>
<th>TOTAL(N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>70% or &gt;</td>
<td>66.7%</td>
<td>33.3%</td>
<td>0.0%</td>
<td>6</td>
</tr>
<tr>
<td>56-70%</td>
<td>50.0%</td>
<td>50.0%</td>
<td>0.0%</td>
<td>8</td>
</tr>
<tr>
<td>41-55%</td>
<td>55.6%</td>
<td>44.4%</td>
<td>0.0%</td>
<td>9</td>
</tr>
<tr>
<td>26-40%</td>
<td>64.3%</td>
<td>35.7%</td>
<td>0.0%</td>
<td>14</td>
</tr>
<tr>
<td>10-25%</td>
<td>40.0%</td>
<td>60.0%</td>
<td>0.0%</td>
<td>50</td>
</tr>
<tr>
<td>&lt;10%</td>
<td>33.8%</td>
<td>60.0%</td>
<td>6.3%</td>
<td>80</td>
</tr>
<tr>
<td>Total</td>
<td>41.3%</td>
<td>55.7%</td>
<td>3.0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

N=NUMBER OF RESPONDENTS =167

These descriptive findings suggest that just about everybody has experienced difficulty with substitute availability.

Examining the data provided in Tables 8 through 12, regardless of demographic characteristics, availability on the average was consistently rated by 41% of the districts as “a serious problem”. Furthermore, about 56% of the districts reported that substitute availability is “a problem”.

The Quality and Availability Relationship

The purpose of the third research question was to determine how quality and availability factors of substitutes are related. In answering this question a crosstabulation analysis was used. The findings are presented in Table 13.
Table 13
Crosstabulation of Quality and Availability of Substitutes in the State of New Jersey

<table>
<thead>
<tr>
<th>QUALITY RATINGS</th>
<th>SERIOUS</th>
<th>PROBLEM</th>
<th>LITTLE OR NO</th>
<th>TOTAL(N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above Average</td>
<td>27.8%</td>
<td>66.7%</td>
<td>5.6%</td>
<td>54</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>-1.4</td>
<td>1.0</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>41.7%</td>
<td>56.3%</td>
<td>1.9%</td>
<td>103</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>.3</td>
<td>-.1</td>
<td>-.6</td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>90.0%</td>
<td>10.0%</td>
<td>0.0%</td>
<td>10</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>2.5</td>
<td>-2.0</td>
<td>-.5</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>40.1%</td>
<td>56.9%</td>
<td>3.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note: N=NUMBER OF RESPONDENTS =167. Pearson Chi-square = 14.962 , significant at the .005 level (2-sided)

The findings provide rather compelling evidence of a significant association between quality and availability. Districts that rate the quality of their substitutes as "poor" are more likely to have "a serious problem" with availability. The Chi-square value of 14.962 is significant at the .005 level. The standardized residuals of 2.5 and -2.0 which indicate the categories that are contributing the most to the chi-square value, denote that districts that rate the quality of their substitutes as "poor", as would naturally be expected, are also identifying availability as a problem. However, the negative residual indicates that the severity of the problem is more serious than expected. The observed outcomes are higher than expected for the "serious problem" availability rating and lower than expected for "problem" availability rating when crosstabulated with the quality rating of "poor". Ninety
percent of the responding districts that categorize the quality of their substitute pool as "poor" are also stating that the availability is a "serious problem". [It is however important to note that the number of school districts in the "poor" quality rating category is small].

Pay as a Factor

The fourth research question of this dissertation study examines the issue of pay for substitute teachers in the state of New Jersey. There is considerable variability in pay for substitute teachers. Some districts offer fixed daily rates, while others have scaled rates based on educational background or number of days in the classroom. Frequency distributions were calculated. Reported findings of the frequency distribution of daily pay rates for both regular and long-term substitutes are presented in Table 14.

Table 14
Daily Pay for Regular and Long-term Substitutes in the State of New Jersey

<table>
<thead>
<tr>
<th>Daily Rate</th>
<th>Regular</th>
<th>Long-term</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$65</td>
<td>11.8%</td>
<td>2.4%</td>
</tr>
<tr>
<td>$65-75</td>
<td>57.1%</td>
<td>12.3%</td>
</tr>
<tr>
<td>$76-90</td>
<td>24.1%</td>
<td>19.6%</td>
</tr>
<tr>
<td>&gt;$90</td>
<td>7.1%</td>
<td>n/a</td>
</tr>
<tr>
<td>Step 1 of salary guide/prorated other</td>
<td>n/a</td>
<td>51.5%</td>
</tr>
<tr>
<td>Total number of respondents</td>
<td>170</td>
<td>163</td>
</tr>
</tbody>
</table>

Regular substitutes are for the most part receiving daily salaries of $65-90 throughout the state. Specifically, 57.1% of the reporting districts are paying $65-75 and 24.1% are paying $76-90. Long-term substitutes are for the most part
commanding higher pay, with 51.5% of the districts reporting that they pay their long-term substitutes a daily proportion of a base salary.

Supports of Pay as a Factor

The purpose of the subsidiary question was to determine how daily substitute pay rates are related to selected demographic characteristics. Substitute pay appears to be a function of district community type, size, per pupil expenditure and number of students enrolled in reduced or free lunch programs. However, it does not appear to be a function of a district’s DFG status. Crosstabulation statistic reports were run to determine if there are any significant relationships. The findings are presented in Tables 15 through 18. Data on long-term substitutes were not factored separately. Response data to overall substitute pay was used for crosstabulation.

Table 15

Crosstabulation of Community Type and Substitute Daily Pay in the State of New Jersey

<table>
<thead>
<tr>
<th>COMMUNITY TYPE</th>
<th>&lt;$65</th>
<th>$65-75</th>
<th>$76-90</th>
<th>&gt;$90</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>20.0%</td>
<td>68.6%</td>
<td>11.4%</td>
<td>0.0%</td>
<td>35</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>1.4</td>
<td>.9</td>
<td>-1.5</td>
<td>-1.6</td>
<td></td>
</tr>
<tr>
<td>Small city (&lt;5000)</td>
<td>25.0%</td>
<td>58.3%</td>
<td>8.3%</td>
<td>8.3%</td>
<td>12</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>1.3</td>
<td>.1</td>
<td>-1.1</td>
<td>.2</td>
<td></td>
</tr>
<tr>
<td>Suburban</td>
<td>9.8%</td>
<td>56.9%</td>
<td>28.4%</td>
<td>4.9%</td>
<td>102</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>-.6</td>
<td>0.0</td>
<td>.9</td>
<td>-.8</td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>0.0%</td>
<td>38.1%</td>
<td>33.3%</td>
<td>28.6%</td>
<td>21</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>-1.6</td>
<td>-1.2</td>
<td>.9</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11.8%</td>
<td>57.1%</td>
<td>24.1%</td>
<td>7.1%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note. Pearson Chi-square = 30.790, significant at the .000 level (2-sided)
An analysis of data in Table 15 as represented by a Chi-square value of 30.790 is significant at the .000 level and suggests that a significant association exists between daily substitute pay and community type. The standardized residual of 3.7 indicates that urban communities pay at a higher rate than the other communities. They pay over $90 per day for daily substitutes more often than other community types. Other community types more often pay $65-75 per day.

Substitute teacher pay also appears to be a function of the number of students enrolled in a district as revealed in Table 16.

Table 16
Crosstabulation of Number of Students Enrolled and Substitute Daily Pay in the State of New Jersey

<table>
<thead>
<tr>
<th>NUMBER OF STUDENTS ENROLLED</th>
<th>SUBSTITUTE DAILY PAY</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;$65</td>
<td>$65-75</td>
<td>$76-90</td>
<td>&gt;$90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 300</td>
<td>25.0%</td>
<td>62.5%</td>
<td>12.5%</td>
<td>0.0%</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Std.Residual</td>
<td>.5</td>
<td>3.2</td>
<td>- .6</td>
<td>- .2</td>
<td>-1.1</td>
<td></td>
</tr>
<tr>
<td>300-999</td>
<td>20.0%</td>
<td>63.6%</td>
<td>16.4%</td>
<td>0.0%</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Std.Residual</td>
<td>1.8</td>
<td>.6</td>
<td>- 1.2</td>
<td>-2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000-1999</td>
<td>9.3%</td>
<td>58.1%</td>
<td>25.6%</td>
<td>7.0%</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Std.Residual</td>
<td>.5</td>
<td>.1</td>
<td>.2</td>
<td>0.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000-2999</td>
<td>0.0%</td>
<td>50.0%</td>
<td>37.5%</td>
<td>12.5%</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Std.Residual</td>
<td>- .1</td>
<td>- .4</td>
<td>1.1</td>
<td>.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3000-4999</td>
<td>6.3%</td>
<td>50.0%</td>
<td>31.3%</td>
<td>12.5%</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Std.Residual</td>
<td>- .6</td>
<td>- .4</td>
<td>.6</td>
<td>.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5000 or &gt;</td>
<td>0.0%</td>
<td>45.8%</td>
<td>33.3%</td>
<td>20.8%</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Std.Residual</td>
<td>- 1.7</td>
<td>- .7</td>
<td>.9</td>
<td>2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11.8%</td>
<td>57.1%</td>
<td>24.1%</td>
<td>7.1%</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

Note. Pearson Chi-square = 29.693, significant at the .013 level (2-sided)

Scrutiny of the data in Table 16 indicates that the Chi-square value of 29.693 is significant at the .013 level. This suggests that a significant association
exists between daily substitute pay and the number of students enrolled (size) in a district. Districts with student populations of 5000 or more pay $90 or greater per day for daily substitutes more often than other sized schools, based on the standardized residual of 2.5 reported. Although not as great of a contributor to the chi-square value, but of noteworthy import are the 1.8 and 1.5 standardized residuals for schools with populations in the 300-999 and less than 300 ranges respectively. In these districts substitute daily pay is more likely to be less than $65 per day. Similarly, the standardized residual of −1.7 for districts with student enrollment of 5000 or more indicates that they are less likely to pay daily substitutes less than $65 per day.

Substitute teacher pay also appears to be a function of district per pupil expenditure as presented in Table 17.
Table 17
Crosstabulation of Per Pupil Expenditure and Substitute Daily Pay in the State of New Jersey

<table>
<thead>
<tr>
<th>PER PUPIL EXPENDITURE</th>
<th>SUBSTITUTE DAILY PAY</th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;$65</td>
<td>$65-75</td>
<td>$76-90</td>
<td>&gt;$90</td>
<td></td>
</tr>
<tr>
<td>Less than $4000</td>
<td>0.0%</td>
<td>0.0%</td>
<td>100.0%</td>
<td>0.0%</td>
<td>2</td>
</tr>
<tr>
<td>Std.Residual</td>
<td>-.5</td>
<td>-1.1</td>
<td>2.2</td>
<td>-.4</td>
<td></td>
</tr>
<tr>
<td>$4000-5999</td>
<td>40.0%</td>
<td>40.0%</td>
<td>20.0%</td>
<td>0.0%</td>
<td>5</td>
</tr>
<tr>
<td>Std.Residual</td>
<td>1.8</td>
<td>-.5</td>
<td>-.2</td>
<td>-.6</td>
<td></td>
</tr>
<tr>
<td>$6000-6999</td>
<td>26.1%</td>
<td>56.5%</td>
<td>13.0%</td>
<td>4.3%</td>
<td>23</td>
</tr>
<tr>
<td>Std.Residual</td>
<td>1.9</td>
<td>0.0</td>
<td>-1.1</td>
<td>-.5</td>
<td></td>
</tr>
<tr>
<td>$7000-8999</td>
<td>8.5%</td>
<td>64.6%</td>
<td>20.7%</td>
<td>6.1%</td>
<td>82</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>.9</td>
<td>1.0</td>
<td>-.6</td>
<td>-.4</td>
<td></td>
</tr>
<tr>
<td>&gt;$9000</td>
<td>9.3%</td>
<td>48.1%</td>
<td>31.5%</td>
<td>11.1%</td>
<td>54</td>
</tr>
<tr>
<td>Std.Residual</td>
<td>-.6</td>
<td>-.8</td>
<td>1.1</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12.0%</td>
<td>56.6%</td>
<td>24.1%</td>
<td>7.2%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note. Pearson Chi-square = 21.056 , significant at the .05 level (2-sided)

An analysis of data in Table 17 as represented by a Chi-square value of 21.056 is significant at the .05 level and suggests that a significant association exists between daily substitute pay and per pupil expenditure. Surprisingly, districts with per pupil expenditures < $4000 have higher than expected rates of pay as evidenced by the 2.2 standardized residual. The others are paying close to what is expected. [It is important to note that the number of school districts in the less than $4000 per pupil expenditure category is small]. Not as strong a contributor, but noteworthy are the standardized residuals of 1.8 and 1.9 for districts whose per pupil expenditures are between $4000-5999 and $6000-6999 ranges respectively, in that they are more likely to pay substitutes less than $65 than the others.

Substitute teacher pay also appears to be a function of the number of students enrolled in reduced or free lunch programs as revealed in Table 18.
Table 18

Crosstabulation Percent of Students Enrolled in Reduced or Free Lunch Programs and Substitute Daily Pay in the State of New Jersey

<table>
<thead>
<tr>
<th>PERCENT ELIGIBLE FOR FREE OR REDUCED LUNCH PROGRAM</th>
<th>SUBSTITUTE DAILY PAY</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>70% or higher</td>
<td>&lt;$65</td>
<td>$65-75</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>.9</td>
<td>-1.0</td>
</tr>
<tr>
<td>56-70%</td>
<td>12.5%</td>
<td>62.5%</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>.1</td>
<td>.2</td>
</tr>
<tr>
<td>41-55%</td>
<td>22.2%</td>
<td>44.4%</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>1.0</td>
<td>- .5</td>
</tr>
<tr>
<td>26-40%</td>
<td>0.0%</td>
<td>42.9%</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>-1.3</td>
<td>- .7</td>
</tr>
<tr>
<td>10-25%</td>
<td>16.0%</td>
<td>64.0%</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>1.0</td>
<td>.6</td>
</tr>
<tr>
<td>Less than 10%</td>
<td>10.0%</td>
<td>58.8%</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>-.3</td>
<td>.2</td>
</tr>
<tr>
<td>Total</td>
<td>11.3%</td>
<td>57.1%</td>
</tr>
</tbody>
</table>

Note. Pearson Chi-square = 35.585, significant at the .002 level (2-sided)

An analysis of data in Table 18 as represented by a Chi-square value of 35.585 is significant at the .002 level and suggests that a significant association exists between daily substitute pay and the percent of students eligible for free or reduced lunch programs. Standardized residuals of 3.5 and 2.0 respectively, indicate that the districts in which the percent of students eligible for free or reduced lunch programs is 70% or higher or those that are in the 26-40% range of eligibility are more likely to pay their substitutes higher than the other eligibility groups.
The frequency distribution on respondent data reveals that very few substitutes are in collective bargaining units. Five out of 170 respondents report that substitutes are in collective bargaining units.

Table 19

Frequency Distribution of Substitutes Covered Under Collective Bargaining Units in the State of New Jersey

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>Total Number of Districts Responding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covered Under Collective Bargaining</td>
<td>2.9%</td>
<td>97.1%</td>
</tr>
</tbody>
</table>

A crosstabulation statistic finds no significant relationship between coverage in a collective bargaining unit and substitute daily pay. It is interesting to note however that all covered are reported in the $65-75 daily pay range as reported in Table 20.

Table 20

Crosstabulation of Substitutes Covered Under Collective Bargaining Units and Substitute Daily Pay in the State of New Jersey

<table>
<thead>
<tr>
<th>Substitutes Covered Under Collective Bargaining Unit</th>
<th>Substitute Daily Pay</th>
<th>&lt;65</th>
<th>$65-75</th>
<th>$76-90</th>
<th>&gt;$90</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>$&lt;$65</td>
<td>0.0%</td>
<td>100.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>5</td>
</tr>
<tr>
<td>NO</td>
<td>$&lt;$65</td>
<td>12.1%</td>
<td>55.8%</td>
<td>24.8%</td>
<td>7.3%</td>
<td>165</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>11.8%</td>
<td>57.1%</td>
<td>24.1%</td>
<td>7.1%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
When analyzing data to determine whether quality or availability is related to substitute pay no significant associations were found using the Pearson Chi-Square test as presented in Tables 21 and 22.

Table 21
Crosstabulation of Quality Ratings to Substitute Daily Pay in the State of New Jersey

<table>
<thead>
<tr>
<th>QUALITY RATINGS</th>
<th>&lt;$65</th>
<th>$65-75</th>
<th>$76-90</th>
<th>&gt;$90</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above Average</td>
<td>18.5%</td>
<td>50.0%</td>
<td>25.9%</td>
<td>5.6%</td>
<td>54</td>
</tr>
<tr>
<td>Average</td>
<td>9.6%</td>
<td>59.6%</td>
<td>23.1%</td>
<td>7.7%</td>
<td>104</td>
</tr>
<tr>
<td>Poor</td>
<td>0.0%</td>
<td>60.0%</td>
<td>30.0%</td>
<td>10.0%</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>11.9%</td>
<td>56.5%</td>
<td>24.4%</td>
<td>7.1%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Although not significant, of the districts responding, the districts that rated the quality of their substitutes as "above average" are paying a greater percent of their substitutes < $65 per day than those districts who rated the quality of substitutes as "average" or "poor".

Table 22
Crosstabulation of Availability Ratings to Substitute Daily Pay in the State of New Jersey

<table>
<thead>
<tr>
<th>AVAILABILITY RATINGS</th>
<th>&lt;$65</th>
<th>$65-75</th>
<th>$76-90</th>
<th>&gt;$90</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A serious problem</td>
<td>7.2%</td>
<td>59.4%</td>
<td>24.6%</td>
<td>8.7%</td>
<td>69</td>
</tr>
<tr>
<td>A problem</td>
<td>13.7%</td>
<td>56.8%</td>
<td>24.2%</td>
<td>5.3%</td>
<td>95</td>
</tr>
<tr>
<td>Little or No problem</td>
<td>40.0%</td>
<td>40.0%</td>
<td>20.0%</td>
<td>0.0%</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>11.8%</td>
<td>57.4%</td>
<td>24.3%</td>
<td>6.5%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Similarly, and also not significant, of the districts responding, the districts that rated the availability of their substitutes as "little or no problem" are paying a greater percent of their substitutes <$65 per day than those districts who rated the availability of their substitutes as "a problem" or "a serious problem".

A crosstabulation analysis using the Pearson Chi-Square test found no significant association between substitute pay and DFG as presented in Table 23.

Table 23

Crosstabulation of DFG and Substitute Daily Pay in the State of New Jersey

<table>
<thead>
<tr>
<th></th>
<th>SUBSTITUTE DAILY PAY</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;$65</td>
<td>$65-75</td>
<td>$76-90</td>
<td>&gt;$90</td>
<td>Total</td>
</tr>
<tr>
<td>A</td>
<td>16.7%</td>
<td>41.7%</td>
<td>16.7%</td>
<td>25.0%</td>
<td>12</td>
</tr>
<tr>
<td>B</td>
<td>4.5%</td>
<td>77.3%</td>
<td>9.1%</td>
<td>9.1%</td>
<td>22</td>
</tr>
<tr>
<td>CD</td>
<td>12.0%</td>
<td>36.0%</td>
<td>40.0%</td>
<td>12.0%</td>
<td>25</td>
</tr>
<tr>
<td>DE</td>
<td>13.8%</td>
<td>62.1%</td>
<td>20.7%</td>
<td>3.4%</td>
<td>29</td>
</tr>
<tr>
<td>FG</td>
<td>20.0%</td>
<td>68.0%</td>
<td>12.0%</td>
<td>0.0%</td>
<td>25</td>
</tr>
<tr>
<td>GH</td>
<td>11.5%</td>
<td>53.8%</td>
<td>26.9%</td>
<td>7.7%</td>
<td>26</td>
</tr>
<tr>
<td>I</td>
<td>8.3%</td>
<td>54.2%</td>
<td>33.3%</td>
<td>4.2%</td>
<td>24</td>
</tr>
<tr>
<td>J</td>
<td>0.0%</td>
<td>57.1%</td>
<td>42.9%</td>
<td>0.0%</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>11.8%</td>
<td>57.1%</td>
<td>24.1%</td>
<td>7.1%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The findings indicate that while generally poorer school districts are paying higher substitute wages there are some more affluent districts that are also paying fairly high wages.

Impact on Professional Development Programs

Results from this research suggest as did the national study conducted of Dorward, Hawkins and Smith (2000) that district administrators are particularly
concerned about the shortage of substitutes when teacher professional development is jeopardized.

The nature of the last research question was to determine to what degree teacher participation in school improvement and professional development activities have been jeopardized by the lack of substitute teachers. In answering this question a frequency distribution was tabulated. There is evidence to suggest that teacher development is being jeopardized by decreased availability of substitute teachers as revealed in Table 24. A large percentage (52.3 percent) of respondents indicate teacher development is "frequently" or "sometimes" affected by inadequate coverage.

Table 24

Teacher Participation in Professional Development Jeopardized by Inadequate Substitute Coverage in the State of New Jersey

<table>
<thead>
<tr>
<th>Rating</th>
<th>Frequency</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequently</td>
<td>5</td>
<td>2.9%</td>
</tr>
<tr>
<td>Sometimes</td>
<td>84</td>
<td>49.4%</td>
</tr>
<tr>
<td>Seldom</td>
<td>49</td>
<td>28.8%</td>
</tr>
<tr>
<td>Never</td>
<td>32</td>
<td>18.8%</td>
</tr>
<tr>
<td>Total</td>
<td>170</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Overall school district personnel believe that teacher participation is affected to some degree. Significant findings were found between teacher participation in professional development opportunities and the quality of the substitute teachers. A
significant association was also found between teacher participation in professional development opportunities and the availability of substitute teachers (see Tables 25 and 26).

Table 25

Crosstabulation of Teacher Participation in Professional Development Jeopardized by Inadequate Substitute Coverage and District Substitute Quality Ratings in the State of New Jersey

<table>
<thead>
<tr>
<th>LEVEL OF JEOPARDY</th>
<th>Above Average</th>
<th>Average</th>
<th>Poor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequently</td>
<td>20.0%</td>
<td>40.0%</td>
<td>40.0%</td>
<td>5</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>-.5</td>
<td>-.6</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>Sometimes</td>
<td>24.1%</td>
<td>71.1%</td>
<td>4.8%</td>
<td>83</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>-1.3</td>
<td>1.1</td>
<td>-0.4</td>
<td></td>
</tr>
<tr>
<td>Seldom</td>
<td>35.4%</td>
<td>60.4%</td>
<td>4.2%</td>
<td>48</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>.4</td>
<td>-.1</td>
<td>-.5</td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>50.0%</td>
<td>43.8%</td>
<td>6.3%</td>
<td>32</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>1.8</td>
<td>-1.3</td>
<td>.1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>32.1%</td>
<td>61.9%</td>
<td>6.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note. Pearson Chi-square = 18.653, significant at the .005 level (2-sided)

A significant association was found between teacher participation in professional development opportunities and the quality of substitute teachers. The Chi-square value of 18.653 was significant at the .005 level. Districts that report that teacher participation is "frequently" jeopardized are more likely to rate the quality of their substitute candidates as "poor". The standardized residual of 3.1 verifies this finding. A standardized residual of 1.8 was found for those districts in which the quality of substitute teaching was "above average". These districts reported that teacher participation in professional development opportunities are "never" jeopardized by the quality of their substitutes. Although not as strong a contributor
to the overall chi-square value, the implication is that districts that report that teacher participation in professional development programs are "never" jeopardized are more likely to rate the quality of the substitutes as "above average".

The findings reveal that 50 percent of the districts that state professional development activities are "never" jeopardized also rate the quality of their substitutes as "above average". However, 71 percent that stated that activities are "sometimes" jeopardized rated the quality of substitutes as "average". Although the number of districts is small in the "frequently" jeopardized category, 40 percent rate substitute quality as being "average" or "poor". It should also be noted that the impact of the shortage of quality substitutes on the issue of effecting whether or not a teacher is able to participate in professional development programs may very well be underreported by the respondents. The knowledge of the substitute shortage, may in fact be guiding district leaders to organize their professional development opportunities so as to avoid any dependency on substitute coverage.
Table 26

Crosstabulation of Teacher Participation in Professional Development Jeopardized by Inadequate Substitute Coverage and District Substitute Availability Ratings in the State of New Jersey

<table>
<thead>
<tr>
<th>LEVEL OF JEOPARDY</th>
<th>A Serious Problem</th>
<th>A Problem</th>
<th>Little or No Problem</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequently</td>
<td>60.0%</td>
<td>40.0%</td>
<td>0.0%</td>
<td>5</td>
</tr>
<tr>
<td>Std.Residual</td>
<td>.7</td>
<td>- .5</td>
<td>- .4</td>
<td></td>
</tr>
<tr>
<td>Sometimes</td>
<td>44.0%</td>
<td>56.0%</td>
<td>0.0%</td>
<td>84</td>
</tr>
<tr>
<td>Std.Residual</td>
<td>.5</td>
<td>0</td>
<td>- 1.6</td>
<td></td>
</tr>
<tr>
<td>Seldom</td>
<td>36.7%</td>
<td>61.2%</td>
<td>2.0%</td>
<td>49</td>
</tr>
<tr>
<td>Std.Residual</td>
<td>- .4</td>
<td>.5</td>
<td>- .4</td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>35.5%</td>
<td>51.6%</td>
<td>12.9%</td>
<td>31</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>- .5</td>
<td>- .3</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>40.8%</td>
<td>56.2%</td>
<td>3.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note. Pearson Chi-square = 14.784 , significant at the .022 level (2-sided)

A significant association was found between those districts that report that their teacher participation in professional development opportunities are “never” jeopardized and their reported availability rating. The Chi-square value of 14.787 is significant at the .022 level suggesting that districts that report that teacher participation is ‘never” jeopardized are more likely to rate the availability of their substitute candidates as “little or no problem”. (see also the standardized residual of 3.2 reported in the Table 26).

The findings reveal that 13 percent of the districts that state professional development activities are “never” jeopardized also rate substitute availability as “little or no problem”. However, 56 percent that stated that activities are “sometimes” jeopardized rated availability as “a problem”, and although the
number of districts is small in the "frequently" category, 100 percent rate availability as being "a problem" or "a serious problem".

Supports to Impact on Professional Development Programs

The purpose of the first subsidiary question was to determine the forms that district professional development programs are taking in the state. A frequency distribution of the respondents stated program formats is presented in Table 27.

Table 27

Types of Professional Development Opportunities in the State of New Jersey

<table>
<thead>
<tr>
<th>Format</th>
<th>Frequency Of Response</th>
<th>Valid Percent of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extended Day</td>
<td>118</td>
<td>70.7</td>
</tr>
<tr>
<td>Saturday</td>
<td>21</td>
<td>12.6</td>
</tr>
<tr>
<td>Summer</td>
<td>100</td>
<td>59.9</td>
</tr>
<tr>
<td>Early Dismissal</td>
<td>88</td>
<td>52.7</td>
</tr>
<tr>
<td>Tuition Reimbursement</td>
<td>149</td>
<td>89.2</td>
</tr>
<tr>
<td>Out-of-district</td>
<td>154</td>
<td>92.2</td>
</tr>
<tr>
<td>In-district Release Time</td>
<td>145</td>
<td>86.8</td>
</tr>
<tr>
<td>In-service built into Calendar</td>
<td>160</td>
<td>95.8</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>7.8</td>
</tr>
</tbody>
</table>

Total Number of Respondents 170

In-service activities built into the district calendar and therefore built into the contractual agreement leads as the primary method of professional development as reported by a 95.8 percent response rate from reporting districts. Out-of-district opportunities, coursework through tuition reimbursement, and in-district release time, follow closely behind with response rates of 92.2 percent, 89.2 percent, and 86.8 percent respectively.
The second subsidiary question on impact of professional development investigates how greatly professional development opportunities are dependent on quality substitute availability. A frequency distribution of the percent of the professional development opportunities dependent on quality substitute availability is presented in Table 28.

Table 28

Percent of Professional Development Opportunities Dependent on Quality Substitute Availability in the State of New Jersey

<table>
<thead>
<tr>
<th>Percent Dependent</th>
<th>Frequency of Response</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than 50%</td>
<td>23</td>
<td>13.9</td>
</tr>
<tr>
<td>30-50%</td>
<td>43</td>
<td>26.1</td>
</tr>
<tr>
<td>10-29%</td>
<td>37</td>
<td>22.4</td>
</tr>
<tr>
<td>Less than 10%</td>
<td>62</td>
<td>37.6</td>
</tr>
</tbody>
</table>

Total Number of Respondents 165

Personnel in 62.4 percent of the responding districts state that 10 percent or greater of the professional development opportunities are dependent on quality substitute availability. The data obtained supports that while some schools are not so dependent there are also districts where reliance exists. Roughly 40 percent of the districts responding state that at least 30 percent of the professional development activities require quality substitute coverage.

The next subsidiary question focused on determining if the new state 100-hour professional training mandate is impacting district need for substitute coverage. A frequency distribution of need responses is revealed in Table 29.
Table 29

Need for Quality Substitutes Compared to Need before 100-hour Mandate

<table>
<thead>
<tr>
<th>Level</th>
<th>Frequency of Response</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Need</td>
<td>83</td>
<td>49.1</td>
</tr>
<tr>
<td>Same Level of Need</td>
<td>80</td>
<td>47.3</td>
</tr>
<tr>
<td>Decreased Need</td>
<td>3</td>
<td>1.8</td>
</tr>
<tr>
<td>No Need</td>
<td>3</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Total Number of Respondents 169

In New Jersey the 100-hour professional development mandate is impacting by increasing the level of need for quality substitutes in 49.1 percent of the reporting districts. It is important to note that this data is based on year one of the implementation phase of the state directed initiative.

The fourth subsidiary regarding teacher participation focuses on whether professional development program designs would be altered in the state if quality substitutes were readily available. A frequency distribution was calculated. The findings are presented in Table 30.
Table 30

Frequency Distribution of Professional Programs That Would Be Altered by Increased Availability of Substitutes in the State of New Jersey

<table>
<thead>
<tr>
<th>Impact Design of Professional Development Programs</th>
<th>YES</th>
<th>NO</th>
<th>Total Number of Districts Responding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readily Available Substitute Coverage</td>
<td>41.9%</td>
<td>58.1%</td>
<td>167</td>
</tr>
</tbody>
</table>

As reported, roughly 42 percent of the respondents predict that if quality substitutes were readily available their professional development program would be altered in some way.

The final subsidiary question in regard to teacher participation in school improvement and professional development activities was designed to study the degree to which a district’s DFG and community type influence the impact ascertained. The relationships were examined by crosstabulation analysis of both DFG and community type to the degree to which teacher participation in school improvement and professional development activities has been jeopardized by lack of substitute teachers. No significant relationships were found using the Pearson Chi-Square test as presented in Tables 31 and 32.
Table 31

Crosstabulation of Teacher Participation in Professional Development Programs Jeopardized by Inadequate Coverage and District Community Type in the State of New Jersey

<table>
<thead>
<tr>
<th>Community Type</th>
<th>Rural</th>
<th>Small city (&lt;5000)</th>
<th>Suburban</th>
<th>Urban</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVEL OF JEOPARDY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequently</td>
<td>0.0%</td>
<td>20.0%</td>
<td>80.0%</td>
<td>0.0%</td>
<td>5</td>
</tr>
<tr>
<td>Sometimes</td>
<td>16.7%</td>
<td>7.1%</td>
<td>58.3%</td>
<td>17.9%</td>
<td>84</td>
</tr>
<tr>
<td>Seldom</td>
<td>24.5%</td>
<td>4.1%</td>
<td>63.3%</td>
<td>8.2%</td>
<td>49</td>
</tr>
<tr>
<td>Never</td>
<td>28.1%</td>
<td>9.4%</td>
<td>56.3%</td>
<td>6.3%</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>20.6%</td>
<td>7.1%</td>
<td>60.0%</td>
<td>12.4%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Although no significant relationships were found between community type and the perceptions that professional development programs would be altered if substitute coverage was readily available; it is interesting to note that urban districts are more likely to state that teacher participation in school improvement and professional development programs are "sometimes" adversely affected by inadequate substitute coverage.
### Table 32

Crosstabulation of Teacher Participation in Professional Development Programs Jeopardized by Inadequate Coverage and District DFG in the State of New Jersey

<table>
<thead>
<tr>
<th>LEVEL OF JEOPARDY</th>
<th>A</th>
<th>B</th>
<th>CD</th>
<th>DE</th>
<th>FG</th>
<th>GH</th>
<th>I</th>
<th>J</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequently</td>
<td>0.0%</td>
<td>0.0%</td>
<td>20.0%</td>
<td>20.0%</td>
<td>0.0%</td>
<td>20.0%</td>
<td>20.0%</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Sometimes</td>
<td>8.3%</td>
<td>15.5%</td>
<td>19.0%</td>
<td>16.7%</td>
<td>15.5%</td>
<td>14.3%</td>
<td>8.3%</td>
<td>2.4%</td>
<td>84</td>
</tr>
<tr>
<td>Seldom</td>
<td>6.1%</td>
<td>10.2%</td>
<td>12.2%</td>
<td>12.2%</td>
<td>10.2%</td>
<td>24.4%</td>
<td>22.4%</td>
<td>6.1%</td>
<td>49</td>
</tr>
<tr>
<td>Never</td>
<td>6.3%</td>
<td>12.5%</td>
<td>6.3%</td>
<td>25.0%</td>
<td>18.8%</td>
<td>12.5%</td>
<td>15.6%</td>
<td>3.1%</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>7.1%</td>
<td>12.9%</td>
<td>14.7%</td>
<td>17.1%</td>
<td>14.7%</td>
<td>15.3%</td>
<td>14.1%</td>
<td>4.1%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Although no significant relationships were found between a district's DFG status and the perceptions that professional development programs would be altered if substitute coverage was readily available; it is interesting to note that I districts (districts that rank second from the top of the socio-economic ranking in the state) are more likely to state that teacher participation in school improvement and professional development programs are “seldom” adversely affected by inadequate substitute coverage and J districts (districts that rank on the top of the socio-economic ranking in the state) are more apt to say that they are “frequently” affected.
CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The undertaking of providing meaningful professional development opportunities for teachers throughout the state is becoming more of a challenge and one of the most important investments for today's educational communities. As we grow with technological advances, heighten our attention to delivering standards-based curriculum and assessments, respond to the complexities of societal issues facing our youth today, and prepare for the exodus of our seasoned professionals and the void that follows, increased attention to the investment is needed. Helping professionals to meet the challenges set forth requires providing meaningful experiences through which reflection, dialogue, inquiry and action can be fostered. Countries such as New Zealand and Japan are creating nationwide programs for building staff development into the workweek. Lesson study, mentoring, coaching, etc. are among the frameworks for building communities of learners that will help us achieve our needs and help us to build the capacity necessary to enhance student learning. Each framework model requires planned release time and to some degree requires quality substitute coverage.

The findings in this dissertation study suggest that educational administrators and policy makers in New Jersey, as well as nationally, must become proactive with respect to substitute policy, procedure, and nurturing. It should be assumed that it is unacceptable for any teaching assignment to be unfilled or undertaken by a
substitute that is under or ill prepared. Let us remind ourselves that approximately 10% of a child’s school year is being taught by substitute teachers and that over the course of 13 grades (K-12) this statistic suggests that over one year of every student’s education is being taught by substitute teachers. A system that enables teaching and learning to move forward must embrace substitutes as professionals fulfilling the same goals and objectives of the classroom teacher. To structure good substitute teacher programs and create a dependable cadre of replacement teachers, among but not limited to, the actions that school administrators can enact are to: hire permanent, full-time substitutes; institute graduated pay scales; offer in-service training; provide feedback; improve recruitment procedures; develop and provide a substitute teacher’s handbook on school rules and policies; see that substitutes receive quality lesson plans; and appoint a district substitute teacher coordinator. Quality substitute teachers are needed so that while classroom teachers are “retooling” students are not held hostage nor left to time wasted. Every teacher and every substitute teacher needs to be the very best. Initiatives at the local district level are paramount for developing cadres of professionals working to help all students achieve.

However, support is also needed at the state level to ensure that systemic change is brought about. Too often, mandates are handed down which rather than foster the good intention, undermines the central premise. State policy makers need to work together with the educational leaders and stakeholders at the district level to devise policy guidelines for substitute hiring, assist in the campaign to attract viable candidates, and support ongoing nurturing of our substitute
professionals. The state of New Jersey has made a commitment to our children through the development of: standards which reflect what all children should know and be able to do; ongoing establishment of statewide assessments to monitor the progress of children (and likewise, schools and districts) achieving those standards; and professional teaching standards that recognize and focus on "teacher learning" as being at the heart of any effort to improve education in our state and in our society. Now it is time for development of state policy that is thoughtful and reflective, knowing that on the average one year of every child's K-12 schooling is being taught by substitute teachers and desiring to have all children achieve the standards adopted by the State Board of Education. Mandates may impede change however, reflective guidance and resourceful affirmation can help to bring about the professional stature that is needed.

This study investigated five issues regarding substitute teachers throughout the state of New Jersey, namely: quality, availability, the relationship between quality and availability, pay rates, and impact on the implementation of professional development programs. Each of the research issues has been supported by subsidiary investigations leading the researcher of this dissertation to significant findings.

The data presented in Chapter 4 indicated that as a group districts in the state of New Jersey are satisfied with the quality of substitutes in the state. Significant associations exist between reported quality of substitutes and both a district's DFG and community type categorizations. The largest percent of a given DFG categorizing their substitutes as "above average" is found in CD districts.
Similarly, the greatest percent of respondents of a given DFG categorizing their substitutes as “poor” is found in A districts. Rural districts are more likely to indicate that their substitutes are performing “above average” and small city districts are more likely to indicate that the quality of their substitutes is “poor”.

Ninety-seven percent of the responding school district personnel state that the availability of substitute teachers is a problem. Of the respondents, roughly 56 percent state availability is “a problem” and 41 percent state it is “a serious problem”. According to this study, the frequency of the recruitment procedures most often used by reporting New Jersey districts are: local advertisement (72.9 percent), applicant’s initiative (62.4 percent), and word-of-mouth (27.1 percent). Just about everybody has experienced difficulty with substitute availability according to the findings of this study.

Various educational requirements and hiring processes are enacted throughout the state. Some college (82.2 percent), application (98.2 percent), interview (78.1 percent), and a criminal background check (96.8 percent) are among the leading requirements for employment as a substitute teacher. Perhaps the most troubling of the findings from this study involves the preparation and ongoing support invested statewide in our substitutes. Requirement factors of: possession of regular teaching certification; completion of a district training program; a four-year college diploma; completion of a teacher skills training; and participation in ongoing professional development are the leading underrepresented contributors to the quality rating. Again, this trend is especially troubling when we consider the evidence that approximately 10 percent of a child’s school year is being taught by
substitute teachers (Staffing Industry, 1999) or that over one year of every student’s education is being taught by substitute teachers (Smith, 1998).

The findings provide rather compelling evidence of a significant association between quality and availability of substitutes statewide. Districts that rate the quality of their substitutes as “poor” are more likely to have “a serious problem” with availability.

There is considerable variability in pay for substitute teachers. Some districts offer fixed daily rates, while others have scaled rates based on educational background or number of days in the classroom. The findings of this research support that significant associations exist between substitute daily pay and a district’s: community type, size, per pupil expenditure, and the percent of students eligible for free or reduced lunch programs.

This study also found that regular substitutes are for the most part receiving daily salaries of $65-90 (81.2 percent) and long-term substitutes receive a portion of step one of the base salary guide (51.5 percent). Urban communities are more likely to pay over $90 per day for substitutes while the majority of other community types are paying $65-70. Districts with populations of 5000 or greater are more likely to pay $90 or more per day for substitutes more often than the other sized schools. Districts with per pupil expenditures less than $4000 are more likely to pay their substitutes between $76 and $90 per day. Districts in which the percent of students eligible for free or reduced lunch programs is 70 percent or higher range or those that are in the 26-40 percent range of eligibility are more likely to pay their substitutes higher than the other eligibility groups. Long-term substitutes are for the
most part commanding higher pay, with 53 percent of the responding districts reporting that they pay their long-term substitutes a daily proportion of a base salary. Ninety-seven percent of substitutes are not covered under collective bargaining units and all that are covered are in the $65-75 per day pay range. No reported significance was found between a district's quality ratings, availability ratings or DFG status and substitute daily pay.

Of particular import is the finding that roughly 53 percent of the respondents state that teacher participation in school improvement or professional development activities is affected by inadequate coverage. Districts that report that teacher participation is "frequently" jeopardized are more likely to rate the quality of their substitute candidates as "poor". Districts that report that teacher participation is "never" jeopardized are more likely to rate the availability of their substitute candidates as "little or no problem".

At a time when as reported by Guskey, in nearly every field the professional knowledge base is expanding at an ever-increasing rate (Guskey, 1991a) and concurrently, the state of New Jersey is committed to raising expectations for ongoing professional development for maintenance of teacher certification, alternate models of providing professional development support are needed. Respondents reported in-service activities built into the district calendar as the primary format (approximately 96 percent) that professional development activities take on. Out-of-district opportunities, coursework through tuition reimbursement, and in-district release time follow closely behind with response rates of roughly 92 percent, 89 percent and 87 percent utilization as reported. Although this study
gathered information regarding types of professional development activities, more specificity is needed to filter whether or not new models of operation are in fact in place. For example, through in-district release time is mentoring, coaching, lesson study, etc. occurring?

District personnel in roughly 62 percent of the responding districts stated that 10 percent or greater of the professional development opportunities are dependent on quality substitute availability. The data obtained supports that while some schools are not so dependent there are also districts where reliance exists. Roughly 40 percent of the districts responding stated that at least 30 percent of the professional development activities require quality substitute coverage. Based only on one year of implementation, the state 100-hour professional development mandate is impacting the level of need for quality substitutes in roughly 49 percent of the responding districts. It was also found that 42 percent of the respondents indicate that professional development plans would be altered if quality substitute coverage was not an issue.

No reported significance was found between a district’s DFG status or community type and the variable of teacher participation in a professional development program being jeopardized.

The New Jersey vs. National Findings

Respondents to this study of New Jersey school districts indicated current quality of substitute teachers to be adequate. Ninety-four percent of school districts indicated that quality was “average” or “above average”. This finding closely mirrors the national results. Nationally substitute quality was reported acceptable in 93
percent of the school districts (Dorward, Hawkins, and Smith, 2000). Quality indicators for the point of this dissertation study were only linked to the educational and hiring requirements for employment as a substitute. Other factors, for example: (reliability, classroom management ability, etc.) may be better indicators or contributors to district personnel’s perception of quality performance and may be implicit in the respondents rating although not targeted in the survey instrument used.

The findings of the study also support overwhelming the findings of Dorward, Hawkins, and Smith’s (2000) national study, namely, that availability is an issue across the board. Nationally, 86 percent of school districts indicated that availability of substitute teachers was either a “problem” or “a serious problem”. This study found 97 percent of New Jersey school districts supporting availability of substitute teachers as problematic.

The national studies of Dorward, Hawkins and Smith (2000) cited in Chapter 2 found that availability of quality substitute teachers varies by region of the country, per pupil expenditure, type of community, and student enrollment. While all regions of the country were found to have problems associated with availability, the Northeast (including Ohio, Kentucky, West Virginia, and Virginia) appeared to have the largest challenge. School districts with per pupil expenditures of less than $4000, or greater than $8000, were more likely to have availability problems. School districts in rural communities appeared to have fewer problems with availability than suburban or urban school districts. In addition, national results also indicated that districts with higher enrollment had higher than expected rates of
availability concerns (Dorward, Hawkins, & Smith, 2000). The findings from the analysis of the New Jersey data suggest that although just about everybody has experienced difficulty with substitute availability no significant associations were found. The New Jersey school complexion as suggested by this dissertation study is that availability problems would more likely occur in a district that has a DFG of A, per pupil expenditures within the range of $4000 to $5999, is urban, and one in which the student population is 5000 or greater.

Pay rates vary for substitute teachers according to the national study of Dorward, Hawkins, and Smith (2000) considerably. The average daily pay for non-certified substitute teachers was from $35 to $140 and ranged from $35 to $185 for certified teachers. Substitute teacher pay appears to be a function of location, per pupil expenditure, and percent of students on free or reduced lunch programs. National findings suggest the lowest salaries are found in the Southern region of the county, districts with per pupil expenditures within the range of $4000 to $4999 have higher than expected rates of pay and at the same time districts within the lowest category of per pupil expenditures tend to have the lowest daily pay, and school districts with higher percentages of students on free or reduced lunch programs tend to pay their substitutes less. From the national picture, analysis of the data reveals that in general, higher pay is related to higher than expected substitute quality (Dorward, Hawkins, & Smith, 2000).

The findings of this state study support that pay rates vary but departs from the national study in not providing the classifications of certified versus non-certified in the data obtained. Regular daily substitutes in New Jersey are for the most part
receiving daily salaries of $65-90 and long-term substitutes are commanding higher pay based on base-salary scales. Significant associations were also found in this New Jersey study between rates and selected demographic characteristics. The New Jersey school complexion as suggested by this dissertation study is that higher substitute pay would more likely occur in a district that: has per pupil expenditures of less than $4000, is urban, has a student population of 5000 or more, and reports the percent of students enrolled in free or reduced lunch programs at either the 70 percent or higher range or in the 26 to 40 percent range. This comparison of the state to the national perspective of pay indicates that the higher the percentage of students enrolled in free or reduced lunch program is a trend for substitute higher pay. No significant association was found between substitute pay rates and substitute quality at the state level.

Lastly, the results from the national study (Dorward, Hawkins, & Smith, 2000) suggests that district administrators are particularly concerned about substitute shortages when teacher professional development is jeopardized. This dissertation study included analysis to customize the issue of participation being jeopardized to include whether or not professional development design plans are being altered and if the new state 100-hour teacher certification mandate has impacted the level of district need for quality substitute teachers. The findings for New Jersey indicate roughly 53 percent of the respondents stated that teacher participation in school improvement is “frequently” or “sometimes” affected by inadequate coverage. An increased need for quality substitutes in the state, due to the initiation of the 100-hour mandate, is being reported by roughly 49 percent of the responding districts.
In addition, approximately 42 percent of the district respondents state that if quality substitutes were readily available their professional development program would be altered in some way.

The final observation of this study relates to what the New Jersey findings tell us about educational policy and practice. As we craft our district professional development plans and continue to seek viable candidates to substitute in our schools we must ask:

1. What growth opportunities are being provided to substitute teachers?
2. What the incentives are for substitute teachers to participate in professional development opportunities?
3. How is professional development linked to the improvement of teaching and to the changes in standards, curriculum, and assessment envisioned by systemic reform and what role do our substitute teachers play in that vision?
4. Are our professional development plans focusing on student needs and learning outcomes?
5. Do professional development opportunities support transmission of knowledge and skills to teachers by teachers of the teaching and learning processes?
6. Do the approaches we use embed professional development in the workplace so it is more closely related to teachers’ work experience?
7. How can we rethink school schedules and distribution of resources to support effective development programs?
8. Do our policies and practices: nurture the concept of job satisfaction? provide professional support for our substitutes? create a climate of social inclusion?

This study has several implications for administrators of substitute teaching programs and policies. Current market conditions have likely contributed to greater tolerance for absence of formal training, ongoing support and formal evaluation of our substitutes. School leaders may need to examine and reassess potential affects that these policies and procedures have on overall program implementation and student performance.

The finding that few school districts, provide substitutes with instruction on teaching strategies, district orientation, or participation in ongoing professional development opportunities, implies that students are receiving instruction from a temporary teacher who has probably little or no training on appropriate teaching methods and very little knowledge of the district’s curriculum, mission, goals, or philosophy. As an educator, as a parent, as a taxpayer, whatever one’s role, this is simply unacceptable. In light of the reported statistic of the time students spend with a substitute teacher in their thirteen years of schooling speaks to the need for further examination of the implications once again on overall program implementation and student performance. Re-examination of “quality” needs to be addressed. The measure of “quality” cannot be that one is: ready and willing; on time; or simply handles classroom control. Teaching and learning needs to happen regularly and routinely, without a beat being missed. The responsibility to provide a rich learning environment is continuous. All stakeholders must change their thinking
about the role that substitute teachers can and should play in the teaching and learning process. Administrators throughout the state can be instrumental in facilitating thoughtful leadership in defining the criteria, the role, and the expectations for the profession known as a substitute teacher.

As Tannenbaum (2000) suggested, the lack of administrators’ commitment to quality and training of substitutes may indeed be compounding the finding of this dissertation study that 97% of the responding districts in New Jersey state that availability of substitutes is problematic.

Recommendations for Further Study

Studies have shown that relatively few individuals work as substitutes for more than a year, and even fewer make a career of it. Consequently, the composition of the substitute pool constantly shifts, necessitating a continual need to replenish the supply of qualified individuals (Wyld, 1995). Recommendations for further study of the issue of quality substitute availability follow.

1. Substitute quality can be perceived using various lenses. Research into how teachers and administrators define quality would inform the discourse.

2. In addition to professional development programs, some school districts have had to cancel classes due to low availability of substitute teachers, while in other schools classes are combined, or administrators pressure teachers to substitute during their planning periods, sometimes compensated sometimes not. Relatively few districts hire permanent substitutes that are available in the district throughout the entire school year and are assigned as needed. A permanent substitute, as a full-time
staff member would receive professional stature and acceptance by the very nature of the employment commitment. Permanent substitutes could be hired as "grade-level" or "content area" specialists, so that in addition to being knowledgeable as to the overall mission, philosophy and curricular designs they could provide grade-level curricula expertise and serve as content area resources. Research into the strategies used and examination as to whether or not the strategy alleviates the substitute shortage problem would help inform policy decision makers.

3. The eye-opening statistic for this researcher is that on the average one year of a child’s K-12 education is being taught by substitute teachers (Smith, 1998). A study that examines the average percent of classes in New Jersey covered by substitute teachers daily, in a given month, or by grade correlated with student performance on standardized tests would provide data for interesting discourse.

4. Substitute teachers are needed not just to "cover" classes but also rather to support the teaching/learning process. A study that includes substitute respondents and identifies those conditions which support job satisfaction would help administrators develop communities of substitute/learners.
References


Cooperman, S. (2000, December 3). Staff development that adds up for teachers, but not for students. The Sunday Star Ledger, 10, p.7.


Mooney, J. (2000, September 10). Shortage has teachers calling the shots, Sunday Star Ledger, Sec. 5, pp. 1, 25.


Virginia: Association for Supervision and Curriculum Development.


Appendix A

Substitute Impact Survey Instrument
Dear Participant: The purpose of this study is to learn more about the impact of quality substitute availability on the implementation of professional development programs in the schools in New Jersey. Your participation is exceedingly valuable. All surveys obtained will remain strictly confidential and the reporting of the results will only be by group analysis. Kindly return your completed survey in the self-addressed stamped envelope. Thank you for your anticipated participation.

PART A

DISTRICT PROFILE: Please circle your response.

1. As of October 2000, how many students were enrolled in your school district?
   a. less than 300
   b. 300-999
   c. 1000-1999
   d. 2000-2999
   e. 3000-4999
   f. 5000+

2. The communities in your district are mainly:
   a. Rural—(primarily agricultural, small town)
   b. Small city (<5000)
   c. Suburban
   d. Urban

3. What was your district's per pupil expenditure last year?
   a. <$4000
   b. $4000-$5999
   c. $6000-$6999
   d. $7000-$8999
   e. >$9000

4. How many certified teachers, FULL-TIME EQUIVALENT (FTE) are in your district?
   a. <100
   b. 100-200
   c. 201-300
   d. 301-400
   e. >400

5. What percent of your students are eligible for free or reduced lunch?
   a. less than 10%
   b. 10-25%
   c. 26-40%
   d. 41-55%
   e. 56-70%
   f. 70% +

6. Are your substitute teachers covered under a collective bargaining agreement?
   a. YES
   b. NO

7. Circle your DFG (District Factor Group):
   A B CD DE FG GH I J
SUBSTITUTE IMPACT STUDY

Directions: Kindly answer all items on the survey.

PART B

SUBSTITUTE AVAILABILITY AND TRAINING: Please circle your response:

8. How would you classify the AVAILABILITY of quality substitute teachers?
   a. Little or no problem  
   b. Sometimes a problem  
   c. Sometimes a serious problem  
   d. Serious problem  
   e. Sometimes a very serious problem  
   f. A very serious problem

9. What are the top two (2) ways you RECRUIT substitute teachers to your district?
   a. Apply on their own  
   b. Local advertisement  
   c. Placement offices  
   d. School newsletters  
   e. Word-of-mouth  
   f. Flyers/notes to parents  
   g. PTO Organizations  
   h. Other

10. How would you classify the QUALITY of substitutes in your district?
    a. Excellent  
    b. Above average  
    c. Average  
    d. Below average  
    e. Unsatisfactory  
    f. Other (Please specify) _________

11. What is your daily pay rate schedule for substitutes?
    DAILY RATES
       a. <$65.  
       b. $65-$75  
       c. $76-$90  
       d. >$90
    LONG-TERM SUBSTITUTES
       a. <$65  
       b. $65-$75  
       c. $76-$90  
       d. base salary step one of scale*(#days/contract days)
       e. Other ________________________________
          (please explain)

12. What is the MINIMUM DISTRICT QUALIFICATION for substitute teachers? (mark all that apply)
    a. Regular teacher state certification  
    b. Completion of district training  
    c. 4-year college diploma  
    d. Some college (Semester hours ______)  
    e. Other (please specify) __________
PART B con’d:

13. Which of the following processes are REQUIRED TO BE A SUBSTITUTE TEACHER in your district? (mark all that apply)
   a. Application
   b. Interview
   c. Reference check
   d. Criminal background check
   e. Completion of district orientation
   f. Completion of teaching skills training
   g. Participation in on-going professional development opportunities
   h. Other (please specify)____________________

14. Are substitute teachers REQUIRED TO ATTEND AN ORIENTATION or SKILLS TRAINING session?
   a. YES
   b. NO
   c. Offered, but not required
   d. Other (please explain)___________________________________________

15. What portion of teacher absences is covered by “permanent district substitute teachers”? (A permanent substitute is a salaried position with budgeted line item).
   a. ALL of our substitute teaching needs are filled with permanent substitute teachers
   b. MOST of our substitute teaching needs are filled with permanent substitute teachers
   c. SOME of our substitute teaching needs are filled with permanent substitute teachers
   d. NONE of our substitute teaching needs are filled with permanent substitute teachers

PART C.

DISTRICT PROFESSIONAL DEVELOPMENT PROGRAMS: Please circle your response.

16. Has teacher participation and/or attendance in school improvement activities been jeopardized by inadequate availability of qualified substitute teachers? (i.e. attendance at conferences, workshops, in-service training, planning sessions, etc.)
   a. Frequently
   b. Sometimes
   c. Seldom
   d. Never

17. Based on the new state 100-hour professional development initiative and your district’s plans, how would you define your current need for quality substitutes compared to your district need before constructing the plan?
   a. Increased need
   b. Same level of need
   c. Decreased need
   d. No need
PART C con'd:

18. What percent of your professional development opportunities are dependent on quality substitute availability?
   a. <10%
   b. 10-29%
   c. 30-50%
   d. >50%

19. If quality substitute coverage was readily available, would your professional development plan be altered?
   a. YES, greatly
   b. YES, somewhat
   c. NO, not at all

20. What types of professional development opportunities does your district currently provide? (mark all that apply)
   a. Extended day/after school
   b. Saturday (in-district)
   c. Summer (in-district)
   d. Early dismissal
   e. Tuition reimbursement
   f. Out-of-district
   g. In-district release time
   h. In-service built-into calendar
   i. Other (please specify)_______

21. Which type of professional development opportunity is the PRIMARY METHOD? (please circle ONLY one response)
   a. Extended day/after school
   b. Saturday (in-district)
   c. Summer (in-district)
   d. Early dismissal
   e. Tuition reimbursement
   f. Out-of-district
   g. In-district release time
   h. In-service built-into calendar
   i. Other (please specify)_______

Please submit any other issue/relevant information that you feel is important for me to know in order to link the data collected.

THANK YOU FOR YOUR COOPERATION IN RESPONDING TO THIS SURVEY.

Title of Position of Person Completing this Survey: Years in Position:  

Please indicate if you would like to receive a report of the findings of this study by including your name and address or e-mail address below.

Kindly mail survey back to: Dorothy Varygianne
1000 Brainard Place
Brielle, New Jersey 08730 in self-addressed stamped envelope enclosed.
Appendix B

Cover Letter to Chief School Administrator
Dear <Proper> <Last>,

I am actively involved in a doctoral study at Seton Hall University in South Orange, New Jersey as a requirement to complete my Ed. D. degree in Educational Administration and Supervision. I am also Director of Curriculum and Instruction for the Colts Neck Township School District (K-8) in Monmouth County.

The purpose of this study is to learn more about the impact of quality substitute availability on the implementation of professional development programs in the schools in New Jersey and compare the results with another study conducted on the national level. I believe your district response will be invaluable as districts work to refine and continue to enhance their professional development plans in response to the fairly new 100-hour state mandate.

Enclosed is a copy of the Substitute Impact Survey instrument. Please route the survey to an appropriate staff member. I realize time is a precious commodity and have constructed an instrument that should take no more than ten minutes to complete. I would like to include your district’s valuable information in my research in order to gain a more complete perspective of the New Jersey impact.

All surveys obtained will remain strictly confidential and the reporting of the results will only be by group analysis. A coding mechanism has been developed to protect the identity of the respondents. The surveys are numbered for follow-up purposes only, and will be destroyed after completion of the study. If you request a copy of the report of the findings for this study you will be asked to include your address or e-mail address at the end of the survey. These addresses will also remain separate from the data and once a copy has been sent to you, that address will also be deleted from the archives. Furthermore, the surveys will be destroyed upon completion of the study.

This project has been reviewed and approved by the Seton Hall University Institutional Review Board for Human Services Research. The IRB believes that the research procedures adequately safeguard the subject’s privacy, welfare, civil liberties and rights. The Chairperson of the IRB may be reached through the Office of Grants and Research Services. The telephone number of the office is (973) 275-2075.

Please be assured that your participation is voluntary and that you may withdraw your participation at any time. If you have any questions about this study, please feel free to call me at (732) 946-0055 ext 4108 or e-mail me at vargiannes@edmail.com.

Please return the completed survey to me by April 30, 2001. Your return will signify that you have read the material above and any question you may have has been answered.
to your satisfaction. Your return of the survey indicates your understanding of the project and your willingness to participate realizing that your participation is voluntary and may be withdrawn without prejudice at any time.

Thank you for your anticipated participation.

Very truly yours,

[Signature]

Dorothy Varygiannes
Appendix C

Letter of Permission
January 23, 2001

Dorothy Varygiannes
1000 Brainard Place
Brielle NJ 08730

Dear Dorothy,

The Substitute Teaching Institute at Utah State University thanks you for your active interest in the research of substitute teacher availability. This letter serves to grant you permission in behalf of Jim Dorward, Amber Hawkins, and Geoffrey G. Smith to make modifications to the survey instrument as you mentioned in previous communication. You may add questions to the survey regarding how the unavailability of substitute teachers may be jeopardizing school improvement and professional development activities.

We wish you luck on your dissertation and thank you again for your time involved in research of substitute teaching issues. We are very interested in seeing your modified survey and also the outcomes of your dissertation.

Sincerely,

Geoffrey G. Smith
Director