Teachers' Perceptions of the Effects of Their Collaborative Involvement in the School Operating Plan: A Descriptive Case Study of Three Schools

by

Rita Neville Taylor

Dissertation submitted to the Faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of DOCTOR OF EDUCATION in Educational Administration

APPROVED:

Steve Parson, Chairman

Joan Curcio Houston Conley

Ron McKeen Walter D. Mallory

1994

Blacksburg, Virginia
TEACHERS' PERCEPTIONS OF THE EFFECTS OF THEIR COLLABORATIVE INVOLVEMENT IN THE SCHOOL OPERATING PLAN:

A DESCRIPTIVE CASE STUDY OF THREE SCHOOLS

by

Rita Neville Taylor

Committee Chairman: Steve Parson
Educational Administration

(ABSTRACT)

The purpose of this study was to examine teachers’ perceptions of the effects of their collaborative involvement in the school planning process. It is a descriptive case study of three elementary schools from a large east coast suburban public school district that had participated in the district’s "Effective Schools Project." These schools evolved from beginning the collaborative planning process to full staff involvement and in some cases, community collaboration on the school operating plan.

This descriptive case study consisted of basically qualitative research, however it also contained a quantitative dimension. The first part was a questionnaire administered to 104 teachers in three schools. The questionnaire survey measured teachers’ perceptions of student achievement, the staff’s level of collaborative involvement over the last several years, teachers’ attitudes regarding collaborative involvement, and what factors motivated teachers to want to become involved in the
process. Descriptive statistics and multivariate regression were used to analyze these data. Following the survey, focus group interviews with three teachers from each of the three schools who had been at those schools the entire time of transition were conducted. Participants for the focus groups were selected from different grade levels and years of teaching experience. The interviews were tape recorded, transcribed, coded, and a content analysis was conducted. Next, three principals from each of the three schools were interviewed separately and their words were also taped, transcribed, and coded. The last part of the study was a review of records consisting of biennial plans and their reports, standardized test scores and other demographic data on each of the three schools. A content analysis of these records was also conducted.

It appears that those items on the questionnaire that were common to teachers' motivation factors had the highest frequencies and percentages for agreement as did those items dealing with perceived student achievement.

Eight themes or constructs emerged during the interviews with teachers and principals—evolution and changing paradigms, implementation of the school plan both before and after collaboration, training, time, ownership, appreciation and recognition, empowerment of teachers, and the whole school as a community. Many of the salient quotes drawn from the interviews have been presented to share the
voices of teachers and principals who have been involved directly in the collaborative planning process.

The data collected from the regression analysis of the survey neither confirmed nor failed to confirm the qualitative data, due to a lack of reliability of two of the scales. However, when looked at simply as descriptive data the survey responses corroborated with the interview data. Teachers' focus group interviews were supported and validated by principals' interviews and by a review of records from the three schools. These records included school operating plans and their final reports as well as standardized test scores. Teachers and principals in these three schools perceive that student achievement has improved since teachers have been involved in the collaborative planning process as indicated by standardized test scores and by other indicators of achievement noted in the evaluation component of the plan. They also perceive the overall school climate as improved since teachers have become collaboratively involved in the school operating plan.
DEDICATION

This manuscript is dedicated to my Aunt Lolly who made a difference in my life.
ACKNOWLEDGMENTS

Numerous individuals deserve recognition for their contributions to the development, and completion, of this doctoral study. I would like to acknowledge and thank the following people for their inspiration, assistance, and continued support.

First and foremost, my thanks to my husband, Mick, who provided steadfast support during this 4-year process.

To my committee, especially my chairman, Steve Parson, and Walt Mallory who provided the direction for my research methodology. Also, I would like to acknowledge Mike Harrison for agreeing to act as the school division sponsor and for granting me interview time and steering me in the right direction.

To my principal, Frank Mehm, and his staff who allowed me to pilot the study at the school site, with an extra thanks to June Welch for her incidental typing and editing, always using the "Queen's English."

To my main typist, Georgette Nuss, for her patience, responsiveness, and expertise.

And, lastly to the dedicated professionals at the three case study sites who made this experience worthwhile, and who guide, direct, and plan for school improvement and quality of instruction for over 2,000 students daily.
# TABLE OF CONTENTS

ABSTRACT .............................................. ii
DEDICATION ........................................... v
ACKNOWLEDGEMENTS ................................. vi
TABLE OF CONTENTS ................................. vii
LIST OF TABLES ....................................... x
LIST OF FIGURES ..................................... xi

CHAPTER 1: INTRODUCTION ......................... 1
    Conceptual Framework .......................... 1
    Assumptions .................................... 5
    Statement of the Problem ..................... 5
    Purpose of the Study .......................... 6
    Research Questions ............................ 6
    Limitations .................................... 6
    Definitions .................................... 7
    Significance of the Study .................... 8
    Organization of the Study .................... 8

CHAPTER 2: LITERATURE REVIEW .................. 9
    Effective Schools Research .................... 9
    Collaborative Management ..................... 13
    Theories of Motivation and Change ............ 19
    Chapter Summary ................................ 24

CHAPTER 3: METHODS OF RESEARCH ............... 26
    Design of the Study ........................... 26
    Context ......................................... 28
    Instrumentation ................................ 30
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire.</td>
<td>30</td>
</tr>
<tr>
<td>Focus Group Interviews of Teachers</td>
<td>31</td>
</tr>
<tr>
<td>Principal Structured Interview</td>
<td>32</td>
</tr>
<tr>
<td>Data Collection.</td>
<td>32</td>
</tr>
<tr>
<td>Methods for Analyzing the Data</td>
<td>35</td>
</tr>
<tr>
<td>CHAPTER 4: RESULTS.</td>
<td>37</td>
</tr>
<tr>
<td>Introduction</td>
<td>37</td>
</tr>
<tr>
<td>Survey Data.</td>
<td>38</td>
</tr>
<tr>
<td>Answers to the Research Questions</td>
<td>40</td>
</tr>
<tr>
<td>Qualitative Data</td>
<td>46</td>
</tr>
<tr>
<td>Themes</td>
<td>47</td>
</tr>
<tr>
<td>Research Question 1.</td>
<td>49</td>
</tr>
<tr>
<td>Evolution and Changing Paradigms</td>
<td>50</td>
</tr>
<tr>
<td>Ownership.</td>
<td>53</td>
</tr>
<tr>
<td>Empowerment of Teachers.</td>
<td>54</td>
</tr>
<tr>
<td>Whole School As Community.</td>
<td>55</td>
</tr>
<tr>
<td>Research Question 1 Summary</td>
<td>56</td>
</tr>
<tr>
<td>Research Question 2.</td>
<td>57</td>
</tr>
<tr>
<td>Evolution and Changing Paradigms</td>
<td>58</td>
</tr>
<tr>
<td>Training</td>
<td>59</td>
</tr>
<tr>
<td>Time</td>
<td>61</td>
</tr>
<tr>
<td>Implementation of the Plan</td>
<td>63</td>
</tr>
<tr>
<td>Research Question 2 Summary</td>
<td>65</td>
</tr>
<tr>
<td>Research Question 3</td>
<td>66</td>
</tr>
<tr>
<td>Ownership.</td>
<td>67</td>
</tr>
<tr>
<td>Empowerment.</td>
<td>68</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Demographic Information as Reported from Questionnaire Characteristics, n = 104</td>
<td>39</td>
</tr>
<tr>
<td>2</td>
<td>Correspondence of Survey Item Numbers Listed as Common to Each Variable Scale Frequencies, Means and Standard Deviations, n = 104</td>
<td>41</td>
</tr>
<tr>
<td>3</td>
<td>Frequency Distribution, Means and Standard Deviations of Agreement as to Perceptions of Involvement in the Biennial Planning Process, n = 104</td>
<td>42</td>
</tr>
<tr>
<td>4</td>
<td>Descriptive Characteristics of Variables (Total)</td>
<td>44</td>
</tr>
<tr>
<td>5</td>
<td>Stepwise Multiple Regression</td>
<td>45</td>
</tr>
<tr>
<td>6</td>
<td>Themes or Constructs Related to Research Questions and Emergent Data.</td>
<td>48</td>
</tr>
<tr>
<td>7</td>
<td>Annual Mobility Rate of the Three Schools, September to June.</td>
<td>77</td>
</tr>
<tr>
<td>8</td>
<td>A Comparison of Mobility Rate to National Percentiles of Iowa Test of Basic Skills School A.</td>
<td>78</td>
</tr>
<tr>
<td>9</td>
<td>Numbers of Identified Students From School A Scoring Below District Average on Iowa Test of Basic Skills.</td>
<td>79</td>
</tr>
<tr>
<td>10</td>
<td>National Percentiles of Iowa Test of Basic Skills Grade 4</td>
<td>81</td>
</tr>
<tr>
<td>11</td>
<td>School C--Students With Learning Disabilities Passing Literacy Testing</td>
<td>84</td>
</tr>
<tr>
<td>12</td>
<td>School C--Total Student Population Passing the State Literacy Test.</td>
<td>85</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>33</td>
</tr>
</tbody>
</table>

1. A Model of the Process of Teacher Change.
2. Triangulation--Data from Multiple Sources Used to Check for Accuracy and Determine Validity.
CHAPTER 1

INTRODUCTION

Teachers often complain that the extra work involved in working on the school operating plan is not their job (McLaughlin and Pfeifer, 1988). However, with increased site-based management, shared, or collaborative decision making, it does become part of their job (Rosenholtz, 1985). Research has also shown that if the plan originated with the teachers and is based on assessed needs, more teachers would develop ownership in it by implementing the plan—its objectives, work plans and evaluation components (Davis, 1991). Would this involvement help to improve the quality of instruction and student achievement? If instruction and student achievement is perceived to improve, would this be motivation for teachers to become more involved in the planning process? This study proposes to explore the idea that the entire process becomes a cycle that supports or replicates itself.

Conceptual Framework

The conceptual framework of this study is grounded in effective schools research and in the site-based management movement. Theories of motivation and change are also part of the conceptual framework.

In recent years, trends towards more decentralization of school systems and increased site-based decision making has resulted in more teacher empowerment and the rise of collaborative management teams that include teachers and
administrators working together to reach consensus on decisions affecting their schools (Rosenholz, 1985). These decisions include planning and assessment practices.

The research on effective schools done by Ronald Edmonds (1979) indicates that local schools need to be empowered by the school system to respond to their own unique needs if they are to be effective in improving the achievement of youngsters whose personal circumstances are less than desirable. Edmonds does not state that school improvement will come about through teachers and principals making collaborative decisions, but rather found that a strong involved principal was a key element in effective inner city schools.

Other Effective Schools literature such as Goodlad’s (1983) contains research-based strategies to improve student outcomes and one of those strategies is for administration to provide opportunities for teachers to collaboratively plan instructional goals (Goodlad, 1983, Rosenholtz, 1985). Because the work of these administrators in effective schools pivots around improving student achievement, teachers have specific concrete goals toward which to direct their efforts and know precisely when those efforts produce the desired effect. Teachers are further encouraged by a supportive collegial group that lends ideas and assistance where needed. In turn, by achieving goals of student learning, teachers are provided with necessary motivation to
continue to produce. The more teachers succeed with students the greater their certainty that it is possible to succeed (Rosenholtz, 1989).

This view of motivation to change toward collaboration is based on Guskey’s (1986) "Theory of Teacher Change," that educational change will only occur when teachers’ attitudes change after student learning outcomes change. Guskey observes that activities that are successful tend to be repeated while those that are not successful, or for which there is no tangible evidence of success are generally avoided. The view is, as depicted in Guskey’s model (Figure 1), that evidence of improvement in learning outcomes of students generally precede significant change in the beliefs and attitudes of teachers. The motivation theories of Maslow (1962), Herzberg (1959), and Vroom (1964) further identify reasons why people are motivated to work. Herzberg (1959) believes that an individual’s attitudes towards job satisfaction can be predicted from the degree to which the job is leading to various outcomes or expectancies. This "Expectancy Theory," according to Vroom, leads to the conclusion that teachers will be satisfied with the job, if they perceive that it leads to things that are highly valued such as improved student achievement.
Figure 1. A Model of the Process of Teacher Change. (From: "Staff Development and the Process of Change" by Thomas R. Guskey, 1986, Educational Researcher, 15, p. 7)
Assumptions

These assumptions provide the starting point for the research study and will not be investigated. They are:

1. The improvement of instruction is the main purpose of the "Effective Schools Project" in the school district being studied.

2. Teachers in the schools being studied are involved in setting goals and objectives for the school plan.

3. Some teachers in the school district being studied have expressed reluctance to devote the time to be involved in the school’s annual plan.

4. Other factors such as socio economic status, mobility rate, and proficiency in English influence student achievement.

5. Teachers’ perceptions can be measured.

Statement of the Problem

The problem addressed by this study is that there is a need to gather additional data about teachers’ perceptions of the effects of their collaborative involvement in the school’s operating plan in relation to student achievement. These perceptions are valuable in order to understand the motivation of teachers to want to participate in the collaborative planning process.
Purpose of the Study

The purpose of the study is to examine teachers’ perceptions of the effects of their collaborative involvement in the school operating plan.

Research Questions

The following general research questions will be addressed in the study:

1. What is the relationship between perceived levels of collaboration and perceived student achievement?
2. What are teachers attitudes about collaborative involvement in the school’s plan?
3. What motivates teachers to be collaboratively involved with the school plan?
4. Does full staff collaborative involvement in the school plan work?

Limitations

1. This study is limited to selected elementary schools in one school district that have moved from little or no collaboration on writing the school operating plan, to an increased level of collaboration indicated by new leadership roles for teachers who plan, monitor and assess student achievement along with administrators.

2. The study will be limited to analyzing the results of using collaborative involvement in the school operating plan and will not be examining in depth the impact of other
factors which may influence student achievement and quality of instruction.

3. Because the subjects of this study were from schools that were part of a school district project and were not randomly selected, the results must be cautiously generalized to other localities.

Definitions

The following definitions refer to terms as they will be used in this study:

1. Site-based management—a school management system designed to improve education by increasing authority of the various actors at the school site (Rosenholtz, 1985).

2. Collaborative decision making—a process of working together as a team and trying to reach consensus on decisions (Schmuck and Runkle, 1985).

3. Consensus—a total group decision usually reached through effective negotiations, involving communication and problem solving to arrive at general agreement (Schmuck and Runkle, 1985).

4. Teachers' perceptions—is defined here as beliefs or opinions expressed by teachers in the questionnaire and interviews.

5. School operating plan—a school plan that establishes objectives based on schoolwide assessments of needs. For each objective there is a work plan and an
evaluation component (Harrison, personal communication, December 18, 1992).

Significance of the Study

If collaborative involvement in the school operating plan is perceived by teachers to be effective in improving students' achievement, then it may become easier to motivate the faculty to continue to be collaboratively involved in the school operating plan. It may also provide further motivation for school district leadership toward even more site-based management, teacher empowerment and staff development for consensus building at the local level.

Organization of the Study

This study will be organized into five chapters. Chapter 1 will include the introduction, conceptual framework, statement of the problem, purposes, research questions, assumptions, limitations, definitions, and significance of the study. Chapter 2 will present a review of the literature relating to effective schools research, the collaborative management of schools, and the theories of motivation and change. Chapter 3 will outline the methods of research, including a discussion of the context, the instruments, research procedures, data collection, and data analysis. Chapter 4 will present the findings and analysis of the data organized around the research questions. Chapter 5 will include a summary, conclusions, implications and recommendations.
CHAPTER 2
LITERATURE REVIEW

Effective Schools Research

The literature that summarizes the ideology of effective schools states that professional staff hold certain beliefs and attitudes:

All students can learn the school's objectives, all students are expected to reach high standards of achievement, teachers can successfully instruct all students in the school's objectives, individual and schoolwide performance on achievement tests is an appropriate goal for success, and the staff is committed to the job of producing high achievement for all students no matter what it takes (Brookover, et al. 1982, p. 21).

The principal is the instructional leader in effective schools, not in the traditional sense where most instructional decisions are made by the principal, but instead leads by having teachers participate in this role (Goodlad, 1983). Goodlad recommends that school districts decentralize authority and responsibility to the local school site and stimulate long range planning in each school under the leadership of the principal, involving collaboration of teachers and assistance in self assessment from the district office.
In a position paper on promoting school success through collaboration and coordination Joyner (1988) argues that effective schools meet their educational objectives when they promote collaboration and educational coordination among all school publics through the participative decision-making School Development Program Model developed by James P. Comer (1987) and the Yale University Child Study Center staff. The emphasis is on changing the interactions of a school from difficult to desirable and, in turn, facilitating the growth and development of parents, school staff, and students. The school development approach is inclusive but broader than the definition of "effective schools" described by Edmonds:

Effective schools seek to promote the overall development of individuals. They enhance social, psychological and moral development among students so they can interact positively with others within and outside their respective social networks and communities. They build within youngsters a strong desire to excel and rise above personal circumstances and to improve themselves and the people and things around them for the good of all. In this process students gain the level of basic skill mastery which allows them to meet all of the expectations of our society in an effective, responsible way as students, and eventually as adult heads of families, members of
communities and citizens. School is the basic unit of change, and each school must have enough operating room within the model's structure to respond to their own unique needs (Edmonds, 1979, p. 15).

In Comer's model of school development there appears to be the highest level of collaboration where teachers and the principal, along with input from the community, develop and monitor the school operating plan along with other practices, according to Joyner. This collaboration aligns with part of McGregor's (1960) Theory Y, where management (the principal) "has arranged organizational conditions and methods of operation so that people can achieve their own needs best, by directing their own efforts towards organizational objectives" (p. 19). Edmond's effective schools formula, however, consists of several factors but emphasizes strong leadership by the principal, particularly in instructional matters (Edmonds, 1982).

In a study by Sizemore, principals were found to believe that teachers can improve student performance and that students themselves are capable of learning. Goals of high student achievement are almost always at the forefront of their planning. Principals and teachers collaboratively set explicit operational goals regarding students' academic performance, which are clearly communicated to their social community (Sizemore, 1986).
Effective schools have highly formalized policies and procedures at the managerial level coupled with low formalization at the technical level. Frequently present in effective schools is administrative and teacher participation in technical decision making, which means that jointly they select instructional material, determine appropriate instructional methods and techniques and establish general instructional policies (Rosenholtz, 1985). "Teachers' willingness to participate in technical decision making denotes adoption of school goals. Of equal importance, technical decisions appear to be the content over which colleagues in effective schools interact" (Rosenholtz, 1985, p. 371). In the most effective school studied by Sizemore (1986), the principal went against district office policy so that teachers could use materials they found most effective. Not unexpectedly, the increased relevance of instructional programs to students' particular needs resulted in greater achievement.

Studies of teacher role ambiguity support the notion that the student achievement benefits of collaborative decision making may result from the deliberate evaluation, suggestions, discussion, and modifications that are necessary to improve the quality of academic programs. This in turn leads to increased teacher clarity about instructional purpose and methods, and, in the end to
increased instructional effectiveness (McLaughlin & Pfeifer 1988).

Azumi and Madhere's (1983) data add to the concept that teachers who have less input in setting instructional goals have greater ambiguity and uncertainty about their capacity to bring about improvements in student performance. Participation in decision making increases teachers' sense of ownership of the school's instructional goals and commits them in the future to the collaborative enterprise. Ownership of school plans is critical for two reasons. First, student achievement suffers at the hands of teachers who are not committed to the plan they are teaching to (McLaughlin & Pfeifer, 1988). Second, ownership on a collaborative basis permits administrative coordination of schoolwide instructional programs, a characteristic frequently cited in the distinction between effective and ineffective schools (Sizemore, 1986).

Collaborative Management

Collaboratively planning the school's annual objectives, evaluation components and work plans leads to teachers in that school sharing the same definition of their work. The picture painted by teachers must have high resolution.

"The more singular and unambiguous the picture teachers see, and the more consistent the information they both send and collect, the less apt they are to develop
alternative teaching goals, the more likely they are to persist in a manner consistent with the goals that they hold" (Perrow, 1970, p. 15).

Rosenholtz (1985) found that there are elementary schools in which principals and teachers together set goals for students' basic skill mastery, agree about their primacy, and the procedures for carrying them out. Instructional goals, to emphasize the obvious, may be set by assessing student needs and then devising means to address them. Goals may also be set through discovery of new priorities by organizational members. Instructional goals, therefore are neither static or intractable. Schools may reformulate or reinterpret them as conditions within the school require it; with shifts in the schools' clientele, perhaps, or as different student needs emerge, or through discovery of new technical knowledge, bringing with it reappraisal of the way objectives are currently being met (Thompson & McEwen, 1988). "Goal setting is a purposive, reiterated activity that orients teachers and principals engaged in this process to the school as a collaborative enterprise" (Rosenholz, 1989, p. 16).

Stuart Smith (1987) lists the elements of a collaborative school:

1. The belief that the quality of education is largely determined by what happens at the school site;
2. The conviction that instruction is most effective in a school environment characterized by norms of collegiality and continuous improvement;
3. The belief that teachers are responsible for the instructional process and accountable for its outcomes;
4. The use of a wide range of practices and structures that enable administrators and teachers to work together on school improvement and the involvement of teachers in decisions about school goals and the means for implementing them (p. 4).

Alfonso and Goldsberry (1982) go on to say what collaboration is not. It does not require the school principal to abdicate authority to a laissez-faire approach to management where administrators hand over the reigns to teachers. "In actuality, strong leaders are necessary in collaborative schools, where they must halt the spread of isolationism and direct the faculty in establishing cooperation" (p. 95).

Consequently a collaborative school requires a higher calibre of leadership than does a bureaucratic school. However, principals must be willing to share authority. Teachers will be taking part in such tasks as setting school goals. Nevertheless, increased responsibility for teachers need not mean decreased authority for principals.

"Principals of collaborative schools have often discovered
that power shared is power gained: teachers' respect for them grows" (Alfonso and Goldsberry, 1982, p. 136).

Deal (1987) emphasized that effective principals in collaborative schools empower their teachers. Administrative support is visible and strong. The principals lead their collaborative teams, schedule time for team activities, gather the required information and facilitate the completion of paperwork. But they do not run or control collaborative meetings because they view the teacher members as the experts in instruction (Deal, 1987).

There is much debate about what instructional leadership is and who should do it and this debate is interwoven with issues of teacher empowerment. One side makes a case for teachers assuming greater control of their work and greater responsibility (Rallis, 1988). The other side emphasizing the need for a strong principal to guide the faculty in instructional matters (Edmonds, 1982). Lieberman and Miller (1981) emphasized the importance of the principal as instructional leader in bringing about improvements in achievement. They maintain that schools must provide the necessary conditions for improvement and these conditions are motivated primarily by the principal. However, according to Lieberman and Miller (1981), school improvers: (1) approach teachers as the experts about teaching and learning, (2) provide rewards for teachers for trying something new, and (3) provide the community with the
right image of the principal as the school improver (p. 583).

Rallis (1988) disagrees somewhat about the role of the principal as the instructional leader. "Clearly the principal is important to the effective operation of a collaborative school. The principal is perhaps the only individual who can see the big picture" (p. 320). When teachers want to assume responsibility as professionals who make instructional decisions and see that these decisions are carried out, why then should the principal serve as the instructional leader? Instructors are the logical pool from which to draw instructional leaders in their schools according to Rallis (1988).

Wentz (1989) believes that for principals to raise student achievement, they must create a learning environment that encourages students to raise their own standards of achievement. The effects of principal leadership, however may be influenced by other factors. For example, some studies have shown that the principals of effective schools have many different leadership styles (Hall, Rutherford, Hord, and Hulling, 1984). Some truly share decision making, while others collaborate to gain input but ultimately make the final decision.

The question remains: What is the emerging role of the principal in a collaboratively managed school? According to Wentz, the emerging school leader of the 21st century will
be a "visionary, who understands that the role of the principal is to create, to facilitate, to encourage, to motivate, to manage by participation, to share decision making, to encourage human potential and yes, to believe all things are possible" (Wentz, 1989, p. 43).

Although studies indicate that teachers desire a voice in setting school goals that concern curriculum, instruction and student personnel, they do not desire participation in decisions regarding supervision, budget/finance and school facilities (Sick & Shapiro, 1991). One of the most consistent findings from various studies on the collaboration process is that going through the process whether it is writing the annual plan, or working on an accreditation self study is that trust is strengthened between the principal and teachers. In a study by Armstrong and Trueblood (1985) trust was considered the most important value and that teacher-supportive elementary principals tend to be the most collaborative, loyal to teachers' beliefs and supportive of teachers' self-reliance and self direction.

In many cases the organization's operational goals are concrete means to achieve the school's professed goals (Perrow 1970). "Sometimes, however, the two are at odds. The disjuncture between professed and operational goals reveals a single underlying problem—the absence of agreement among the organization's participants about both the outcome they seek and the prescribed ways by which these outcomes
can be reached." (Rosenholtz, 1985, p. 359). This disjuncture between professed and operational goals is nowhere more apparent than in loosely coupled, ineffective urban schools (Rosenholtz, 1985).

Collaborative schools differ dramatically from these loosely coupled schools. In collaborative schools there are clearly defined formal goals concerning students' basic skill acquisition (Brookover, 1982; Sizemore, et al., 1986), agreements between administrators and teachers as to the importance of these goals, and prescribed means to implement them consistently (Sizemore, et al., 1986). Agreement about goals and means to achieve them increases the school's capacity for rational planning. One study illustrates the power that is wielded by collaborative thinking. Spunk (1974), sampling teachers from 28 California schools, found that irrespective of salary, physical environment and student socio-economic status, schools reporting low levels of teacher absenteeism also report high faculty agreement with organizational goals. Another study done by Griffin (1990) regarding collaborative decision making and job satisfaction/morale found a high correlation between teacher decision making and teacher morale.

Theories of Motivation and Change

The question now is how does one initially motivate teachers to want to take the time to become involved in collaborative school planning? Abraham Maslow (1962) had
the answer to this question more than thirty years ago when he taught about self actualization. He identified five basic human needs and at the top was the need for self actualization. This need motivated individuals to actions as a means of satisfying their psychological need for self-esteem.

Herzberg (1959) also believed that the psychological needs of teachers focus on the aspects of self-esteem and an be met through addressing an individual’s need for achievement, recognition and growth.

An individual derives satisfaction from those actions that meet these psychological need for self-esteem and voluntarily selects an action with the expectancy that his direct behavior will result in an indirect outcome which is desirable and perceived to be important to the individual (Vroom, 1964).

An alternative position based not on human needs, but rather on wants emerging from open-ended human potential is often broadly referred to as "Action Theory." When individuals in organizations are seen to act based on individual interpretations and understanding from their own unique worlds, wants emerge and can lead to personnel development that is creative and new. They choose their actions proactively rather than react on the basis environmental stimuli. Since these individuals are naturally active in making choices of action on the basis of
individually held meanings, they may not need to be motivated in the traditional sense. They do not need environmental stimuli to create certain behavior, but instead make sense out of situations, interpreting them to fall into categories of meaning, and create definitions of circumstances and events which force them to act. Thus, individuals operate from different understandings, interpretations, and perceptions of work situations (Weick, 1979).

In order to manage an individual's energy in a certain direction, some sense of the individual's make-up or sense of his identity is necessary. This active individual's energy needs channeling. The manager must negotiate common understanding of the employee's wants and the organization's goals. The manager needs to acknowledge the employee as a person and must attempt to appreciate the frame of reference from which this individual operates--an appreciation for individual differences. Those aspects of job performance that make sense and are meaningful and appealing to an employee ought to be encouraged (McKeen and McSwain, 1990). An effective manager of a collaborative school would not need to "motivate" teachers in the traditional sense, but rather through knowledge and appreciation of an individual's make-up, could just tap that person to do what he is best suited for.
Collaboration in planning the school's objectives is a change for teachers. Guskey (1986) suggests that, "significant change in teachers' beliefs and attitudes is likely to take place only after changes in student learning outcomes are evidenced" (p. 7).

Guskey (1986) observes that activities that prove to be successful will be repeated while those that are not successful, or for which there is no tangible evidence of success, are generally avoided. Therefore, if planning collaboratively can be shown through evidence to lead to improvement in student achievement, then this evidence may be a prerequisite to significant change in beliefs and attitudes of teachers.

This change for teachers involving attitudes or behaviors which are integrated around self, often means that to change implies giving up of something which they value. For example, some teachers believe that their behavior is to teach their students well, not to become involved in the overall school planning process. They received excellent ratings for this well done job before and this has been valued. Now a different role is expected.

As Schein (1969) states "Any change in behavior or attitudes of this sort tends to be emotionally resisted because even the possibility of change implies that previous behavior and attitudes were somehow wrong or inadequate" (p. 99). For the vast majority of teachers, becoming a better
teacher means enhancing the learning outcomes of their students. McLaughlin and Pfeifer (1988) report that "A primary motivation for teachers to take on extra work and other personal costs of attempting to change is the belief that they will become better teachers and their students will benefit" (p. 75).

Lortie (1985) observed that teachers are reluctant to adopt new practices or procedures unless they feel sure they can make them work. To change, or to try something new means to risk failure; therefore training and staff development is critical, as is evidence that these new behaviors in collaborative planning benefit students.

Berman (1981) believes that internal support is a key component for educational change and that one source of this support comes from central office. However, the principal working with the teachers seems to have the greatest motivational impact with the teachers. Therefore, it would appear that the degree to which the principal supports the teachers in their collaborative efforts and is a part of the collaborative process, the more successful the results.

Deming's (1982) philosophy known as the "Fourteen Points" based on "Six Principles," borrows from the theories on human motivation that were put forth years ago by such experts as Herzberg and Maslow. Deming believes in the intrinsic motivation of mankind, and that it is management's policies that often serve to demotivate employees. "Instead
of helping workers develop their potential," Deming asserts, "management often prevents them from making a meaningful contribution to the improvement of their jobs and robs them of the self-esteem they need to foster motivation" (p. 93). Deming's Six Principles can be applied to the process of school collaborative planning, especially points 3, 4, and 5.

3. All significant, long lasting improvement must emanate from top management's commitment to improvement.

4. Change and improvement must be continuous and all encompassing. It must involve every member in the organization.

5. The ongoing education and training of all employees in the company are a prerequisite for achieving constant improvement (Deming, 1982, p. 23).

Deming (1993) also stated "that the climate of an organization influences an individual's contribution far more than the individual himself" (p. 46). He went on even more bluntly to say, "The way people work together is what produces excellence."

Chapter Summary

This review of the literature concerning collaborative staff involvement in school planning and student achievement, has focused on effective schools' research, collaborative school-based management, and theories of
motivation and change. Little has been written linking the very specific collaborative task of developing and monitoring the school operating plan and perceived student achievement.
CHAPTER 3

METHODS OF RESEARCH

This chapter describes the design of the study, the context, instrumentation, the methods of data collection, and the methods used for analyzing the data.

Design of the Study

The design of the study was a descriptive case study with a quantitative dimension (survey) of three different elementary schools. The study’s purpose was to examine teachers’ perceptions of the effects of their being collaboratively involved in the school operating plan on their perceptions of student achievement. Therefore, along with a staff opinion survey, the teachers’ words were the primary data.

The first part of the study was a survey questionnaire constructed by the researcher and administered to all of the teachers in each of the three schools; there was a population of 104 teachers. The survey enabled the researcher to collect data on teachers’ motivation, attitudes, level of collaboration in working on the school plan and their perceptions of student achievement. Descriptive statistics and stepwise regression were used to analyze the data. Cronbach’s Alpha was the measure of reliability (Assessment Systems Corporation, 1987) used with the survey’s multi-item scales.
Following the survey, qualitative case study data were gathered through focus group interviews with three teachers at each of the three schools for the purpose of obtaining their perspectives of the biennial planning process. Marshall and Rossman (1989) write:

The process of designing mainstream qualitative research . . . that values participants' perspectives in their worlds and seeks to discover those perspectives, that views inquiry as an interactive process between the researcher and the participants, and that is primarily descriptive and relies on people’s words as the primary data (p. 11).

The teachers selected to participate in the focus group met the following criteria:

1. All were at the school during the entire time of transition from no collaboration to full staff collaboration.

2. Participants reflected different levels of teaching experience.

3. Participants taught at different grade levels, with at least one primary teacher and one upper elementary teacher.

Also, structured interviews with the three principals at each of the three schools were conducted and their words are included with the qualitative data.
Finally, a review of records was conducted at the three schools. These records consisted of standardized test scores, the school’s operating plans, ethnic distribution of students, the language minority population, and the student mobility rate. The data from the three schools were analyzed separately through content analysis.

Context

The three schools selected were from a division consisting of approximately 130 elementary schools having an elementary teacher population of 2,000. This school district has been involved in a school improvement process called the "Effective Schools Project", and these three schools were part of the district’s project. These schools were identified by a research analyst from the district as having evolved from beginning the collaborative process to full staff collaboration in writing and monitoring the school’s plan. In this study these schools were identified as school A, B, and C.

The primary purpose of the Effective Schools Project was to improve the achievement of students. Basic strategies in this district’s project stressed improving the individual school’s planning and assessment process, encouraging the use of research and literature about effective schools, and increasing the participation of teachers in the making of instructional decisions, including collaboratively writing the school’s annual or biennial
operating plan (Nocerino, M. A.; Plitt, W.; Rogers, C., 1991).

In the three schools selected for this study there was a committee in place called "The Effective Schools Committee." This committee of teachers and principals focused on a school plan that was collaboratively developed by a broad range of staff members. These staff members monitored and discussed specific student achievement according to indicators of achievement in order to assess progress to meet school objectives (Harrison, personal communication, December 18, 1992).

The biennial plan (Appendix A) consists of objectives including indicators of achievement, an evaluation of student outcomes component and work plans designed for implementing, monitoring, assessing, and evaluating school effectiveness. Individual school staffs, including principals and selected teachers are encouraged and trained to involve community and the entire staff in developing the school plan.

After development, the plan is then submitted to the area superintendent where it is reviewed and sent back to the school for revision if necessary. Monitoring of the plan by area personnel is ongoing throughout the year. In addition, a mid-cycle report and final report are reviewed in conference with the superintendent. Data collection for the mid-cycle and final report is also ongoing throughout
the school year, and is done at the school site (Harrison, personal communication, December 18, 1992).

In the school district being studied there are some schools where there is little or no staff collaboration in this process, even though the district strongly encourages and supports collaboration. In other schools, such as the three in this study there is full staff collaboration, along with some community involvement. The process has evolved over the last several years. The school district’s Office of Research and Policy Analysis assists schools by offering staff development for school staffs in planning and assessment techniques.

Instrumentation

Questionnaire

A questionnaire was designed by the researcher to measure four variables (Appendix B):

1. Teachers’ perceptions of the level of collaboration within the school.

2. Teachers’ attitudes regarding collaboration.

3. Motivation of teachers to become involved in the school’s planning process.

4. Teachers’ perceptions of student achievement and quality of instruction.

The teachers were asked to respond to statements about the four variables. The statements on the questionnaire evolved from the general research questions. In addition,
the questionnaire was used to collect demographic data along with perceptions. A Likert scale with five possible responses was used for the questionnaire (Likert, 1967). In pretesting the questionnaire, a field test was conducted at a pilot school with a sample of participants similar to the population of the three schools in the study. The main purpose of the field test was to determine item clarity. Some items were found to be unclear by the participants and those items on the instrument were revised by the researcher. Also, a statistical analysis including multivariate regression analysis was conducted as part of the pilot. Nothing highly suspect was found.

**Focus Group Interviews of Teachers**

The focus group interview guide was first field tested with three teachers at the pilot school. Based on their comments regarding clarity of items, the guide was edited.

Teacher participants were selected by the researcher based on demographic data from each of the three schools. These included the number of years at the school and the teacher's grade level. Only teachers who had been at the school three or more years were included because they were witness to the changes in developing the school plan. Teachers were also selected for the focus group who represented different grade levels. The interview guide was developed by the researcher and used to facilitate discussions and interaction in the teacher focus groups.
(Appendix C). According to Morgan (1988) the hallmark of focus group is:

The explicit use of the group interaction to produce data and insights that would be less accessible without the interaction found in a group (p. 12).

Teachers' responses, discussions, and interactions with each other and the researcher often led to more probing questions that were not included in the original interview guide. The interview items and the more probing questions were, however, all based on the research questions. All interviews were tape recorded and transcribed for analysis.

**Principal Structured Interview**

Another guide was developed and used in interviewing the principal at each of the three schools (Appendix C). Data were gathered from notes and tape transcriptions. The questions in the interview guide were developed to respond to the overall research questions that guided this study. The structured interview was piloted with the principal of a school not included in the study group.

**Data Collection**

The strategies for gathering data for this study employed both survey and qualitative research methodology. Structured interviews of principals were conducted along with a review of each of the three schools' records in order to triangulate the data (Jick, 1979) (see Figure 2).
Figure 2. Triangulation--Data from Multiple Sources Used to Check for Accuracy and Determine Validity (Jick, 1979).
The researcher attended faculty meetings in the three schools to explain the purpose of the study and stressed teacher anonymity. The questionnaires were distributed and the teachers completed the survey during the meeting. This method of distribution produced a 100% return rate. Meetings were scheduled and twice rescheduled to obtain 100% attendance of the faculty.

The next source of data was garnered from focus group interviews with three teachers from each school. These teachers were identified as teacher A, B and C in the notes and taped transcriptions to preserve the anonymity of each teacher. These interviews provided rich descriptions of their involvement in the collaborative planning process and their perceptions of student achievement and quality of instruction. The focus group produced a great deal of interaction among the participants. Principals’ interviews followed the teachers’ focus group. These interviews were also taped and notes were taken in the principals’ offices after school hours. The tapes were also later transcribed.

The use of a questionnaire, focus groups, interviewing, and later the review of records allowed the researcher to triangulate (see Figure 2) and gain "multiple viewpoints for greater accuracy" (Jick, 1979, p. 602). The wealth of contextual detail from the focus groups and interviews was, in part, what helped establish the validity of this study. An examination of district documents on each school that
contained standardized test data, ethnic background, language, mobility rate, and statistics was conducted and was included in the triangulation. Also, a careful examination of several years worth of copies of the schools’ annual and biennial operating plans was conducted.

Methods for Analyzing the Data

The quantitative teacher surveys were optically scanned into a data file for statistical analysis using SPSS (Norusis, 1988). Descriptive statistics and multivariate regression were run. Correlations between the four variables were calculated and the independent variables were entered into the equation in a stepwise fashion. The following equation was tested:

\[ \text{Perceived student achievement} = b_1 \text{(level of collaboration)} + b_2 \text{(teachers' attitudes)} + b_3 \text{(teachers' motivation)} \]

Survey items common to level of collaboration refers to the staff's level of collaboration, both in depth and breadth. Teachers' attitudes refers to their attitudes regarding involvement in the school planning process and teachers' motivation refers to those factors that influenced teachers to want to become involved. The surveys were analyzed by school and aggregate.

In analyzing the qualitative data, the focus groups, and interviews, the researcher listened to the tapes many
times, took notes, and read the transcriptions three times before generating preliminary coding categories. Marshall and Rossman (1989) suggested "reading, reading, and once more reading the data" in order to become very familiar with it before forming categories (p. 114). Eight different emergent themes were identified (see Table 6). As interviews were conducted and transcribed, evolving patterns or commonalities in the data became clear. A color coding system was developed to analyze the interview data. These "coding categories" were used to sort the data. Codes were assigned to even the most minor categories. This allowed the researcher to search and sort data by common themes. This was done on a large grid as suggested by Miles and Huberman (1984). The interview data were compared for content compatibility and were analyzed several times for underlying themes. This coding system was reviewed by a researcher experienced in ethnographic research and was found to be accurate.

Descriptive statistical data were compared with qualitative data. The school's records were also carefully analyzed to validate the information garnered from the focus groups and principal interviews.

Although the design would have been simplified using only one instrument as the data source, the findings would not have been as detailed or as accurate in providing a complete profile of the three schools in the study.
CHAPTER 4

RESULTS

Introduction

This research study was undertaken to examine teachers' perceptions of the effects of their collaborative involvement in the school's annual or biennial operating plan. Investigated were the staff's level of collaboration, teachers' attitudes regarding collaboration, teachers' motivation factors that influenced them to become collaboratively involved in the planning process, and teachers' perceptions of student achievement.

Both qualitative and quantitative survey data were collected. A summary of qualitative data follows the presentation of statistical data in the chapter. One hundred and four teachers completed the "Involvement in the Biennial Planning Process--Faculty Opinion Survey" (Appendix B). Nine of the respondents also participated in focus group interviews (Appendix C) and three principals completed individual structured interviews (Appendix D). Numerous embedded quotations are included in order to maintain the authenticity and voice of the respondents who participated in the interviews, so that corroborating or contrasting viewpoints are defined. A summary from the review of records from each of the three schools is presented.
Survey Data

Two demographic items were included in the survey. Respondents were asked to mark which school, A, B or C, they were working in, and to indicate their years of working at their present school. The results are presented in Table 1.

Respondents were asked to indicate their years of teaching in the school by marking the appropriate category "1-2 years," "3-4 years," "5-6 years" or 7+ years." Thirty-four teachers (32.7%) had been in their present school two years or less. The majority of these teachers had teaching experience before coming to this school. Thirty-nine teachers were in their present school between 3-4 years (37.5%). Sixteen teachers were in their present school between 5-6 years (15.4%) and fifteen had seven or more years in their present school (14.4%). Therefore, 68% of all the respondents had been in their present schools more than 3 years (during which time the school moved from the beginnings of staff collaboration to full staff collaboration). The 32% of teachers that had two years or less teaching experience in their present school were included in the survey but were not selected to be interviewed.
Table 1

Demographic Information as Reported from Questionnaire

Characteristics, n = 104

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>School working in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>38</td>
<td>36.5</td>
</tr>
<tr>
<td>B</td>
<td>29</td>
<td>27.9</td>
</tr>
<tr>
<td>C</td>
<td>37</td>
<td>35.6</td>
</tr>
<tr>
<td>Years in present school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2 years</td>
<td>34</td>
<td>32.7</td>
</tr>
<tr>
<td>3-4 years</td>
<td>39</td>
<td>37.5</td>
</tr>
<tr>
<td>5-6 years</td>
<td>16</td>
<td>15.4</td>
</tr>
<tr>
<td>7+ years</td>
<td>15</td>
<td>14.4</td>
</tr>
</tbody>
</table>
Answers to the Research Questions

Using the survey phase of the study, the findings are presented by addressing the first three research questions:

1. What is the relationship between perceived levels of collaboration and perceived quality of instruction and student achievement?

2. What are teachers' attitudes about collaborative involvement in the school's plan?

3. What motivates teachers to be collaboratively involved in the school plan?

Table 3 illustrates the teachers' responses to the statements from the survey questionnaire. The number and percentages of respondents in agreement for each item is listed. The mean for each item is given, as is the standard deviation.

It appears that those items on the questionnaire that were common to motivation had the highest frequencies and percentages for agreement, as did those dealing with perceived student achievement, followed by the variable of perceived levels of collaboration (Table 2).

The responses of those teachers indicated that they were motivated to become involved in the collaborative process because of their answers to the items on the survey that dealt with ownership, professional growth, appreciation and recognition (Table 3). Before stepwise multiple
Table 2
**Correspondence of Survey Item Numbers Listed as Common to Each Variable Scale Frequency, Means and Standard Deviations, n = 104**

<table>
<thead>
<tr>
<th>Survey Item Numbers</th>
<th>Strongly agree n</th>
<th>%</th>
<th>Agree n</th>
<th>%</th>
<th>Disagree n</th>
<th>%</th>
<th>Strongly disagree n</th>
<th>%</th>
<th>Not enough info n</th>
<th>%</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable/Scale 1: Level of collaboration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>24</td>
<td>22.6</td>
<td>44</td>
<td>41.5</td>
<td>12</td>
<td>11.3</td>
<td>3</td>
<td>2.8</td>
<td>21</td>
<td>19.8</td>
<td>2.548</td>
<td>1.413</td>
</tr>
<tr>
<td>7</td>
<td>16</td>
<td>15.1</td>
<td>47</td>
<td>44.3</td>
<td>20</td>
<td>18.9</td>
<td>2</td>
<td>1.9</td>
<td>19</td>
<td>17.9</td>
<td>2.625</td>
<td>1.301</td>
</tr>
<tr>
<td>11</td>
<td>40</td>
<td>37.7</td>
<td>54</td>
<td>50.9</td>
<td>5</td>
<td>4.7</td>
<td>2</td>
<td>1.9</td>
<td>3</td>
<td>2.8</td>
<td>1.788</td>
<td>0.855</td>
</tr>
<tr>
<td>15</td>
<td>4</td>
<td>3.8</td>
<td>8</td>
<td>7.5</td>
<td>31</td>
<td>29.2</td>
<td>55</td>
<td>51.9</td>
<td>5</td>
<td>4.7</td>
<td>3.442</td>
<td>0.923</td>
</tr>
<tr>
<td>19</td>
<td>27</td>
<td>25.5</td>
<td>48</td>
<td>45.3</td>
<td>18</td>
<td>17.0</td>
<td>2</td>
<td>1.9</td>
<td>9</td>
<td>8.5</td>
<td>2.212</td>
<td>1.121</td>
</tr>
<tr>
<td><strong>Variable/Scale 2: Teachers' attitudes about collaboration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>14.2</td>
<td>44</td>
<td>40.4</td>
<td>11</td>
<td>10.6</td>
<td>0</td>
<td>0.0</td>
<td>14</td>
<td>13.2</td>
<td>2.365</td>
<td>1.158</td>
</tr>
<tr>
<td>8</td>
<td>10</td>
<td>9.4</td>
<td>27</td>
<td>25.5</td>
<td>43</td>
<td>40.6</td>
<td>19</td>
<td>17.9</td>
<td>5</td>
<td>4.7</td>
<td>2.827</td>
<td>0.999</td>
</tr>
<tr>
<td>12</td>
<td>25</td>
<td>23.6</td>
<td>60</td>
<td>56.6</td>
<td>11</td>
<td>10.4</td>
<td>5</td>
<td>4.7</td>
<td>3</td>
<td>2.8</td>
<td>2.048</td>
<td>0.896</td>
</tr>
<tr>
<td>16</td>
<td>8</td>
<td>7.5</td>
<td>21</td>
<td>19.8</td>
<td>47</td>
<td>44.3</td>
<td>24</td>
<td>22.6</td>
<td>4</td>
<td>3.8</td>
<td>2.952</td>
<td>0.969</td>
</tr>
<tr>
<td><strong>Variable/Scale 3: Motivation to become involved</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>17</td>
<td>16.0</td>
<td>50</td>
<td>47.2</td>
<td>21</td>
<td>19.8</td>
<td>7</td>
<td>6.6</td>
<td>9</td>
<td>8.5</td>
<td>2.433</td>
<td>1.113</td>
</tr>
<tr>
<td>9</td>
<td>19</td>
<td>17.9</td>
<td>55</td>
<td>51.9</td>
<td>19</td>
<td>17.9</td>
<td>5</td>
<td>4.7</td>
<td>6</td>
<td>5.7</td>
<td>2.269</td>
<td>1.007</td>
</tr>
<tr>
<td>13</td>
<td>16</td>
<td>15.1</td>
<td>52</td>
<td>49.1</td>
<td>18</td>
<td>17.0</td>
<td>4</td>
<td>3.8</td>
<td>12</td>
<td>11.3</td>
<td>2.404</td>
<td>1.203</td>
</tr>
<tr>
<td>17</td>
<td>18</td>
<td>17.0</td>
<td>47</td>
<td>44.3</td>
<td>9</td>
<td>8.5</td>
<td>11</td>
<td>10.4</td>
<td>17</td>
<td>17.3</td>
<td>2.625</td>
<td>1.381</td>
</tr>
<tr>
<td>20</td>
<td>16</td>
<td>15.1</td>
<td>55</td>
<td>51.9</td>
<td>23</td>
<td>21.7</td>
<td>7</td>
<td>6.6</td>
<td>3</td>
<td>2.9</td>
<td>2.288</td>
<td>0.910</td>
</tr>
<tr>
<td><strong>Variable/Scale 4: Teachers perceptions of student achievement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>22</td>
<td>20.8</td>
<td>48</td>
<td>45.3</td>
<td>8</td>
<td>7.5</td>
<td>2</td>
<td>1.9</td>
<td>24</td>
<td>22.6</td>
<td>2.596</td>
<td>1.452</td>
</tr>
<tr>
<td>10</td>
<td>13</td>
<td>12.3</td>
<td>41</td>
<td>38.7</td>
<td>14</td>
<td>13.2</td>
<td>4</td>
<td>3.8</td>
<td>29</td>
<td>27.9</td>
<td>2.865</td>
<td>1.520</td>
</tr>
<tr>
<td>14</td>
<td>59</td>
<td>55.7</td>
<td>39</td>
<td>36.8</td>
<td>4</td>
<td>3.8</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>1.9</td>
<td>1.529</td>
<td>0.750</td>
</tr>
<tr>
<td>18</td>
<td>19</td>
<td>17.9</td>
<td>33</td>
<td>31.1</td>
<td>28</td>
<td>26.4</td>
<td>8</td>
<td>7.5</td>
<td>15</td>
<td>14.2</td>
<td>2.654</td>
<td>1.298</td>
</tr>
<tr>
<td>21</td>
<td>43</td>
<td>40.6</td>
<td>52</td>
<td>49.1</td>
<td>1</td>
<td>.9</td>
<td>1</td>
<td>.9</td>
<td>7</td>
<td>6.6</td>
<td>1.817</td>
<td>1.022</td>
</tr>
</tbody>
</table>

*Values are: 1, strongly agree; 2, agree; 3, disagree; 4, strongly disagree; 5, Not enough information.
*Means were calculated on value 1-4 only.
*Item numbers correspond to statements on survey (see Table 3).
*Negatively worded items.
Table 3

Frequency distribution, Means and Standard Deviations of Agreement as to Perceptions of Involvement in the Biennial Planning Process, n = 104

<table>
<thead>
<tr>
<th>Item</th>
<th>Item Responses</th>
<th>n</th>
<th>%</th>
<th>n</th>
<th>%</th>
<th>n</th>
<th>%</th>
<th>n</th>
<th>%</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. The level of teacher collaboration on the plan has noticeably increased over the last several years.</td>
<td></td>
<td>24</td>
<td>22.6</td>
<td>44</td>
<td>41.5</td>
<td>12</td>
<td>11.3</td>
<td>3</td>
<td>3.2</td>
<td>21</td>
<td>18.8</td>
</tr>
<tr>
<td>4. Being involved with writing the plan has made the plan easier to implement.</td>
<td></td>
<td>16</td>
<td>14.2</td>
<td>64</td>
<td>60.4</td>
<td>11</td>
<td>10.4</td>
<td>0</td>
<td>0.0</td>
<td>14</td>
<td>13.2</td>
</tr>
<tr>
<td>6. Collaborative involvement in the biennial planning process has resulted in my feeling ownership in the plan.</td>
<td></td>
<td>17</td>
<td>16.0</td>
<td>60</td>
<td>57.2</td>
<td>21</td>
<td>19.8</td>
<td>7</td>
<td>6.6</td>
<td>9</td>
<td>8.5</td>
</tr>
<tr>
<td>6. Teachers in our school usually teach to the objectives of the school's biennial plan.</td>
<td></td>
<td>22</td>
<td>20.8</td>
<td>48</td>
<td>46.3</td>
<td>8</td>
<td>7.6</td>
<td>2</td>
<td>1.9</td>
<td>24</td>
<td>22.6</td>
</tr>
<tr>
<td>7. Collaborative involvement of the teachers in the planning process has led to more collaboration in other professional areas.</td>
<td></td>
<td>19</td>
<td>16.1</td>
<td>47</td>
<td>43.3</td>
<td>20</td>
<td>18.9</td>
<td>2</td>
<td>1.9</td>
<td>19</td>
<td>17.9</td>
</tr>
<tr>
<td>8. I feel that I have not received adequate training in the biennial planning process.</td>
<td></td>
<td>10</td>
<td>8.4</td>
<td>27</td>
<td>26.3</td>
<td>43</td>
<td>40.6</td>
<td>18</td>
<td>17.9</td>
<td>5</td>
<td>4.7</td>
</tr>
<tr>
<td>9. Working on the biennial plan has been a professional growth experience for me.</td>
<td></td>
<td>18</td>
<td>17.9</td>
<td>66</td>
<td>61.9</td>
<td>19</td>
<td>17.9</td>
<td>6</td>
<td>5.7</td>
<td>6</td>
<td>5.7</td>
</tr>
<tr>
<td>10. I feel that student achievement in this school has improved over the last several years.</td>
<td></td>
<td>13</td>
<td>12.3</td>
<td>41</td>
<td>38.7</td>
<td>14</td>
<td>13.2</td>
<td>4</td>
<td>3.8</td>
<td>28</td>
<td>27.9</td>
</tr>
<tr>
<td>11. In our school almost every teacher has some involvement in the collaborative planning process.</td>
<td></td>
<td>40</td>
<td>37.7</td>
<td>54</td>
<td>50.9</td>
<td>5</td>
<td>4.7</td>
<td>2</td>
<td>1.9</td>
<td>3</td>
<td>2.8</td>
</tr>
<tr>
<td>12. Because of staff collaboration on the plan, school priorities are clearer.</td>
<td></td>
<td>25</td>
<td>23.6</td>
<td>40</td>
<td>46.6</td>
<td>11</td>
<td>10.4</td>
<td>6</td>
<td>5.7</td>
<td>3</td>
<td>2.9</td>
</tr>
<tr>
<td>13. My contributions to the plan have been viewed by my colleagues as important.</td>
<td></td>
<td>16</td>
<td>15.1</td>
<td>62</td>
<td>58.7</td>
<td>18</td>
<td>17.0</td>
<td>4</td>
<td>3.8</td>
<td>12</td>
<td>11.3</td>
</tr>
<tr>
<td>14. Most teachers in this school believe that all students can learn.</td>
<td></td>
<td>59</td>
<td>55.7</td>
<td>39</td>
<td>36.8</td>
<td>4</td>
<td>3.8</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>1.9</td>
</tr>
<tr>
<td>15. Relatively few of our teachers are involved in the biennial planning process.</td>
<td></td>
<td>4</td>
<td>3.8</td>
<td>8</td>
<td>7.6</td>
<td>31</td>
<td>29.2</td>
<td>66</td>
<td>61.9</td>
<td>5</td>
<td>4.7</td>
</tr>
<tr>
<td>16. The main effect of collaborative planning is more paperwork for teachers.</td>
<td></td>
<td>8</td>
<td>7.5</td>
<td>21</td>
<td>19.8</td>
<td>47</td>
<td>43.3</td>
<td>24</td>
<td>22.6</td>
<td>4</td>
<td>3.8</td>
</tr>
<tr>
<td>17. My contributions to the plan have been viewed by the principal as important.</td>
<td></td>
<td>18</td>
<td>17.0</td>
<td>47</td>
<td>44.3</td>
<td>9</td>
<td>8.5</td>
<td>11</td>
<td>10.4</td>
<td>17</td>
<td>17.3</td>
</tr>
<tr>
<td>18. Students perform at higher than expected levels in this school.</td>
<td></td>
<td>19</td>
<td>17.9</td>
<td>33</td>
<td>31.1</td>
<td>28</td>
<td>26.4</td>
<td>12</td>
<td>11.3</td>
<td>16</td>
<td>14.2</td>
</tr>
<tr>
<td>19. Many teachers in this school are very involved in the biennial planning process.</td>
<td></td>
<td>27</td>
<td>25.6</td>
<td>48</td>
<td>45.3</td>
<td>18</td>
<td>17.0</td>
<td>2</td>
<td>1.9</td>
<td>8</td>
<td>8.5</td>
</tr>
<tr>
<td>20. I want to be involved in the biennial planning process.</td>
<td></td>
<td>16</td>
<td>15.1</td>
<td>56</td>
<td>51.9</td>
<td>23</td>
<td>21.7</td>
<td>7</td>
<td>6.6</td>
<td>3</td>
<td>2.9</td>
</tr>
<tr>
<td>21. Teachers teach to the school system Program of Studies objectives in this school.</td>
<td></td>
<td>42</td>
<td>40.8</td>
<td>52</td>
<td>49.1</td>
<td>1</td>
<td>.9</td>
<td>1</td>
<td>.9</td>
<td>7</td>
<td>6.5</td>
</tr>
</tbody>
</table>

Note. SD = Standard deviation.

*Values are: 1, strongly agree; 2, agree; 3, disagree; 4, strongly disagree; 5, not enough information.

*MMeans were calculated on value 1-4 only.

*Items grouped under motivation variable.
regression was conducted, correlations had to be calculated. The correlation of those items common to motivation with those items common to perceptions of student achievements are presented in Table 4. They appeared to be highly correlated while the other two scales were not.

Teachers' attitudes indicated that 35% felt that they did not receive adequate training in the biennial planning process and almost 33% resented the extra paperwork.

A stepwise multiple regression analysis (Table 5) was then conducted comparing the scale scores of each of the independent variables of the total number of respondents to the dependent variable, student achievement. The variable of motivation at first seemed to best explain the variance in the dependent variable of perceived student achievement (49%). When perceived levels of collaboration was added to motivation, 51% of the variance seemed to be explained. The independent variable scale on attitudes did not enter into the equation. The probability to enter (PIN) was set at .05. This (.05) was defined as significant. Because of the scale on attitudes not entering into the equation, the regression data became suspect and it was decided to conduct a test of scale reliability.

To measure the reliability of the four variable scales, Cronbach's Alpha was computed separately for each scale after the regression analysis was conducted. There was a fairly strong overall or total scale reliability alpha
Table 4

Descriptive Characteristics of Variables (Total)

<table>
<thead>
<tr>
<th>Variable/scale</th>
<th>Scale mean (from Table 2 values)</th>
<th>Scale standard deviation</th>
<th>Correlation/ perception of student achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1 Level of collaboration</td>
<td>2.25</td>
<td>.378</td>
<td>.4697*</td>
</tr>
<tr>
<td>X2 Attitudes</td>
<td>2.39</td>
<td>.286</td>
<td>-.1114</td>
</tr>
<tr>
<td>X3 Motivation</td>
<td>2.15</td>
<td>.596</td>
<td>.7025**</td>
</tr>
<tr>
<td>Y Perception of students and quality of instruction</td>
<td>2.04</td>
<td>.468</td>
<td>1.000</td>
</tr>
</tbody>
</table>

*p < .05

**p < .01
### Table 5

**Stepwise Multiple Regression**

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>T value</th>
<th>Sig T</th>
<th>Mult. R</th>
<th>$R^2$</th>
<th>Adj $R^2$</th>
<th>SE</th>
<th>F</th>
<th>Sig F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 1</strong> $Y = bX_3 + a$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation X3</td>
<td>.56</td>
<td>.06</td>
<td>.70</td>
<td>9.72</td>
<td>.00</td>
<td>.70</td>
<td>.49</td>
<td>.49</td>
<td>.34</td>
<td>94.5</td>
<td>.00</td>
</tr>
<tr>
<td>Constant</td>
<td>.84</td>
<td>.12</td>
<td></td>
<td>6.55</td>
<td>.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong> $Y = bX_3 + bX_1 + a$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation X3</td>
<td>.49</td>
<td>.06</td>
<td>.62</td>
<td>7.7</td>
<td>.00</td>
<td>.49</td>
<td>.52</td>
<td>.51</td>
<td>.33</td>
<td>51.73</td>
<td>.00</td>
</tr>
<tr>
<td>Level of collaboration X1</td>
<td>.24</td>
<td>.11</td>
<td>.18</td>
<td>2.2</td>
<td>.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.44</td>
<td>.21</td>
<td></td>
<td>2.0</td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Attitudes X2 did not enter the equation at PIN = .05.*
coefficient of .78 and also a strong reliability alpha coefficient for the variable of motivation of .834, and for the variable of teachers’ perceptions of student achievement the alpha coefficient was also a fairly strong .72. The variable of levels of collaboration had a low reliability coefficient of alpha .334 and the variable of attitudes was so low that it was a negative number, alpha coefficient of minus 1.04. This indicates that these last two scales had poor internal consistency and therefore poor reliability.

Because of the low reliability coefficients of two of the scales, the data collected from the regression analysis of the survey neither confirmed nor failed to confirm the qualitative data. When looked at simply as descriptive data certain tentative claims may be made, such as in each of the three schools, items common to motivation had the highest percentages of agreement, as did those items dealing with perceived student achievement.

Qualitative Data

Analysis of the qualitative data obtained during the interviews with the teachers and principals and a review of the records from each school provided a more extensive portrait of perceptions of involvement in the school’s planning process and student achievement. In this part of the study, data were again organized in a manner which addressed the primary research questions and provided additional information about the perceptions measured on the
"Involvement in the Biennial Planning Process--Faculty Opinion Survey" (Appendix B).

This section begins with a list of each of the major constructs or themes that emerged from the analytical study of the transcribed interviews. Table 6 illustrates which themes were related to each of the four research questions.

**Themes**

Eight major themes or constructs emerged as the respondents described their perceptions regarding their involvement in the school planning process. They were:

1. **Evolution and Changing Paradigms**--refers to the changing level, both in depth and breadth, of collaborative involvement in the school plan and the shift in teachers' attitudes towards their involvement in the operational planning process of the school.

2. **Implementation of the Plan Before and After Collaboration**--refers to the degree that the school operating plan was actually implemented in the classrooms when only the principal or assistant principal wrote it and after teachers became collaboratively involved with it.

3. **Training**--refers to the quality and quantity of training the teachers and principals received from the district's Office of Research and Policy Analysis both before beginning the process and throughout the process.

4. **Time**--refers to teachers' attitudes regarding the amount of time the collaborative planning process takes.
Table 6

Themes or Constructs Related to Research Questions and Emergent Data

<table>
<thead>
<tr>
<th>Constructs or Themes</th>
<th>Research Quest. 1 Perceived levels of Collaboration</th>
<th>Research Quest. 2 Attitudes About Collaborative Involvement</th>
<th>Research Quest. 3 Motivation of Teachers to Become Involved</th>
<th>Research Quest. 4 Does Collaboration Work?</th>
<th>Emergent Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Evolution or changing paradigms</td>
<td>X*</td>
<td>X*</td>
<td></td>
<td>X*</td>
<td></td>
</tr>
<tr>
<td>2. Implementation of plan before and after collaboration</td>
<td></td>
<td>X*</td>
<td></td>
<td>X*</td>
<td></td>
</tr>
<tr>
<td>3. Training</td>
<td></td>
<td>X*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X*</td>
</tr>
<tr>
<td>5. Ownership</td>
<td>X*</td>
<td></td>
<td>X*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Appreciation and recognition</td>
<td></td>
<td></td>
<td>X*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Empowerment of teachers</td>
<td></td>
<td></td>
<td>X*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Whole school as community</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X*</td>
</tr>
</tbody>
</table>

*Teachers' and principals' interviews
*Teachers' focus group interviews
*Principals' interviews
5. Ownership--refers to teachers' sense of ownership of the school plan.

6. Appreciation and Recognition--refers to teachers feeling appreciated and recognized for their contribution and extra work in the school's planning process.

7. Empowerment of Teachers--refers to teachers' sense of feeling truly empowered to write objectives; design forms and questionnaires necessary to collect data; monitor, analyze, and report progress of the school operating plan.

8. Whole School as a Community--refers to an awareness on the part of the entire staff of the whole school moving forward towards common goals.

Certain themes emerged in answer to certain research questions, others just emerged during the interviews and these are listed under emergent data.

Research Question 1

"What is the relationship between the perceived levels of collaboration and perceived quality of instruction?" The level of collaboration is defined here as the depth and breadth of involvement by different groups in the school community and just how much is that involvement.

The interview data, indicated that the level of collaborative involvement in the school's planning process has continued to evolve and increase over the last several years in schools A and B. School C, which was a brand new school, opening three years ago, began with collaborative
involvement of the entire staff in the school’s planning process from the beginning.

**Evolution and Changing Paradigms**

The principal of school C was appointed during the construction phase of the school. She had been the principal of a much smaller elementary school and had developed a vision of a site-based management school through her experiences in that school. During the staffing process which involved her interviewing over 300 people for the 17 positions to be filled, she presented her vision of a site-based management team to prospective teacher applicants. Teacher selection centered on professionals who were willing to get involved in the decision making process in a new school. The principal stated, "Part of the process was looking for people that were open and flexible and willing to make decisions and not come in with pre-existing ideas."

The staff at school C spent the first week brainstorming about shared decision making, how they were going to do it, learning to come to consensus and writing the annual operating plan for the school. Therefore, school C was not involved in an evolution or in changing teachers’ ways of looking at things as were schools A and B. All of the teachers at school C were selected because they wanted to be collaboratively involved in the school’s planning process. In the other two schools, this was not the case.
In school A, a new principal was appointed by the school board. She became a change agent in a school that had been traditionally run by a principal that made most decisions, including writing the school plan by herself. This principal describes the change:

Well, what I did was ask for volunteers to come in during the summer when I first got here. Twelve to fifteen came in and we brainstormed together. We looked at the elementary study, realized some concerns, and these concerns became objectives as we drafted our plan. When the faculty returned we shared them and got more input. When I became principal, faculty meetings became committee meetings . . . work sessions. It was very difficult for some people. A couple of people looked at their watch during the A.O.P. [Annual Operating Plan] committee meetings. We are now in the fifth year.

Teachers at this school responded:

We have changed our way of thinking and we were so used to having the principal make decisions. Someone tells you what to do and you do it. That was easier. Committee meetings take time and you don’t always come up with decisions, but the process got better.

It took a while for many of us to come around, to that way of thinking, it is our job and it’s O.K. if we don’t all agree, learning to come to consensus is a very process-oriented thing.

School B had a somewhat easier time of it because they had just gone through a self study and the steering committee team of the self study became the collaborative management team. The principal spoke of the evolution process:

The self study helped the teachers identify some areas we needed to address and the next year we had to write where we came from and where we were going from and how far we came from. This is important and we have continued it every year. They could now see this plan was valued, and it was going out to the whole staff and
the whole staff needed to work on it. It was being taken seriously. It has been five years. First year, just to get a handle on the collaboration process, not a voting process. They were just vehicles through which the whole staff worked. They were gatherers of information but shared with everyone. First year, rocky. Second year, how do we make this work? Third year was when the work really began to take shape. All the data were collected from the self study and presented and the collaborative management team wrote the Annual Operating Plan. Fourth year there was a big change in refining the survey and in student achievement, new survey, new student achievement.

A teacher from school B echoed closely what the principal said:

It evolved so gradually it was no big deal. We were working on a self study so it automatically brought everyone into the collaborative process. First year it was pretty rocky. We thought we were to be a Faculty Advisory Council [a small representative number of teachers who bring faculty concerns to the principal]. It continues to evolve with more and more participation from all levels.

Change has occurred in all three schools. In school C, which began with full teacher collaboration, the level of participation has now extended to include parents. The P.T.A. financially supports the work plans of the biennial plan, therefore they have been included in decision making committees. School C has definitely evolved the furthest by involving the most levels of people including parents and all instructional assistants. The principal states, "It changes, evolves and everyone eventually comes on board because everybody has to be involved in the process to understand it."
Ownership

When the three principals and three focus groups were asked the question: Do you feel that the school plan is a more meaningful document since the teachers collaborate on it, the principal and teachers at school C spoke of their prior experience at other schools in order to make this comparison. The principal said, "Since teachers have been involved, they clearly see how all the parts affect the instructional program. It [plan] is much more meaningful." A teacher from school C supported that position by stating, "Since becoming part of the collaborative planning process, I feel there is definitely more correlation to what I do day to day to match the school operating plan." All of the teachers in school C agreed that the plan is much more meaningful now. The principal of school C summarized:

The document is much more meaningful now because it is what teachers really want and need. They put into the document things they want to see happen to students and for themselves in areas of staff development. If they incorporate into the staff development part and emphasize what they want, they are more likely to get staff development money to put towards what is in writing in the Biennial Plan, because now P.T.A. monies support the Biennial Plan. We have parents on two committees and these parents are on the P.T.A. board that raise money to support staff development funding [conference fees for teachers, substitutes].

All of the teachers from all of the schools spoke about how much more meaningful the document has become because the teachers now have ownership. The following quotes from
three teachers are representative of what the teachers were saying:

You will buy into it and teach to its work plans if you help create it . . . . If you help create it you feel ownership and it becomes more enjoyable to do.

It is more pertinent and more meaningful now. We create it so we buy into it.

When we create it as a staff we are going to think of ways to improve instruction and what are meaningful to teachers.

Empowerment of Teachers

In this model of involvement the teachers collect and analyze the data for the plan, and they also design the data collection forms on targeted students. Some of these forms are quantitative. For alternative assessment teachers design checklists, teacher questionnaires, parent questionnaires, or student questionnaires or whatever the plan calls for. Teachers also write grant proposals as part of their various objectives committees’ business, since each different objective committee is composed of people who are responsible for seeing that particular objective is met.

When given the statement about this collaboration just giving lip service to empowerment, the teachers responded:

No, we feel empowered, no one changes what we write.

No, we feel that the area office knows what we do and that we are in the forefront of collaborative decision making, and nobody changes anything we write. I think that at some schools that may be true. I was at a school where we spent, it felt like years, doing planning and then it would come down to the bottom line and there was usually a meeting of about three or four people that actually decided how we were going to do it. People resented it. I’m not saying it’s perfect
here but there is a lot more give and take and interaction and consensus building.

Finally in answer to the research question on the relationship between the perceived levels of collaboration and the perceived quality of instruction and student achievement the theme of "the whole school as a community" emerged.

Whole School As Community

Teachers rotate on various objective committees, serving on different committees for each year or planning cycle.

Because of involving all the staff--principal, assistant principal, teachers and assistants and in some cases the parents and other community members, there is more awareness of the whole school or the "big picture." As the principal of school A related, "When teachers have their team meetings and one says 'I have no idea what they are talking about,' someone else does because they sat on that committee and can clear up miscommunication." And the teachers on her staff added:

Now we look at small details of what the whole school is doing, it gives us a broader picture and you think I'm part of a bigger picture not just my own class.

School goals became our goals.

We see Part of the Picture [annual report of standardized test scores and other demographics published in each school by the school district], statistics, you see where the whole school is.

We see the whole school as a community, not just our classroom. We think of each teacher’s kids as our
kids. We work on plans and improve the achievement of kids who are not just on our grade team.

We see the big picture because on the committee there are all grade levels represented.

On the committees you get to discuss philosophical type issues, what is good for the school, not just what is good for your classroom.

The whole staff has been involved in some way.

This sixth grade teacher, during a meeting with her sixth grade team was able to help her colleagues who were new to understand something, because she had served on that committee. So you see that the more people you have around that know what the process is, even though for that year they might not be working on it, they have a lot of support for the whole idea around the building.

Research Question 1 Summary

Content analysis of qualitative data for levels corroborated the results of the "Involvement in the Biennial Planning Process--Faculty Opinion Survey" with a high degree of consistency since items common to levels had a fairly high percentage of agreement and a strong correlation with perceived student achievement. As teachers and principals witnessed that as the level of collaboration in the plan increased, that is, the more different groups of people became involved--administrators, specialists, classroom teachers, teaching assistants and in one school, parents and other community members, the more they believed this involvement benefitted students. Also, the degree of involvement with staff sitting on different objective committees, collecting data on their objective, analyzing and reporting to the entire staff, and then rotating on to a
different committee the next year was perceived as benefiting schoolwide student achievement. It was perceived by all that as the level of involvement increased, instruction improved because of commitment to their plan.

Research Question 2

"What are teachers’ attitudes about collaborative involvement in the school’s plan?"

Teachers’ attitudes about collaborative involvement in the school’s plan have changed in relation to the number of years they have been involved in the planning process. All of the teachers in all three schools reported becoming more comfortable with the process as time went on. Most teachers reported a rocky first year and felt that the training, if any, they received prior to becoming involved was not enough. This is consistent with the survey data which reports that 35% of the staff did not feel they received adequate training. During the focus interviews with the teachers, it appeared that most perceived they learned more by doing, with support from the Office of Research and Policy Analysis rather than through training.

The Time theme emerged during discussions concerning teachers’ attitudes about their involvement in the planning process. Teachers and principals referred often to the fact that collaborative planning takes a lot of time.
Evolution and Changing Paradigms

When asked about their initial reactions when told that being part of the planning process was part of their job, teachers at schools A and B answered differently than school C teachers. This again was because school C teachers knew, through their initial staffing interviews, that this was to be part of their job, and most of them wanted to work in school C because of that.

School C teachers reported:

I thought it sounded pretty interesting, I’d like to be involved in it. And once I realized what exactly this meant, I was still glad I was involved in it, but I didn’t realize how encompassing it was.

I welcomed the idea of it, but once it was a reality, it was a lot more work and took a lot more time than I ever anticipated.

The evolution of it and the unfolding of the whole process took a lot of time, but it was also rewarding.

Teachers at schools A and B had much different reactions when asked the same question. Some of their responses were very negative. Staff members from schools A and B recalled their initial reactions:

When it started here people thought, this is nuts! It’s just because the principal doesn’t want to do as much work. You know, she wants to give her work to teachers to do. And it took a while for people to get the idea that that’s not really what was going on and it really took getting those people involved in the process to see that it’s not a matter of the principal not doing the work she’s supposed to do. It’s all of us working together to get the job done, and the principal is right in there working with us.

We had a lot of fits and starts. We’d have committee meetings where we would look at Bill and Mary Ann from the Office of Research and Policy Analysis, and think
they knew something that we didn’t know and the committee would be going great guns and all of a sudden we’d get bogged down. I think that was part of the real learning process, just to accept the fact that it wasn’t always a quick process because you didn’t have one person making the decision. It was trying to get a consensus. And building a consensus was hard. I mean this is a large staff.

When principals were asked at schools A and B, both replies to the question about teachers’ initial reaction were very similar:

They tried to be an F.A.C. [faculty advisory committee] when we first started, bringing up bathroom issues, cafeteria. It took almost an entire year for a clear understanding of their task. Now they say, "That’s an F.A.C. issue, we don’t deal with that."

There was confusion, lack of understanding of what they were to do, another task on top of what they were already doing. Skepticism, and there are a few who still do not understand what the school plan is and how it affects them directly in the classroom. They looked at it as another countywide requirement that had no day to day impact on classroom activities. It required more time of them and there wasn’t any relevance directly toward them.

Training

All three schools had training opportunities through the district’s Office of Research and Policy Analysis and two people from that office came to each of the schools to work with the faculty. Only in school C, where the principal had been familiar with the Effective Schools Project from her previous school, did the teachers who moved to the new school with the principal have any initial
training from the principal. All of the teachers in the other two schools received training along with the principal as they proceeded. The principal of school A stated:

The whole school system has given us a lot of support with training. The Office of Research and Policy Analysis people were part of my original collaborative team and on my steering committee and they met with us once a month. We were focusing in on our own needs but it was something other schools were doing too.

The teachers from school A concurred but did not elaborate "We were sent to training sessions at the Office of Research and Policy Analysis and their people came here."

One teacher from school B spoke of getting started:

Area representatives came in to introduce it. Then a few of us went to two full days of in-service at the Office of Research and Policy Analysis. They hand held us through the problem areas.

Teachers in school C spoke more of on-going support:

When we first became part of the Effective Schools Project and began to collaboratively write our Annual Operating Plan, we received training consistently throughout.

I thought there was a lot of support from Bill and Mary Ann.

The principal of school C spoke of ongoing training tied in with leave time and leave funding. "We have tremendous support plus leave time given to us by the office of Research and Policy Analysis." In other words, this office funds substitutes to come to the school in order to free up teachers who want off for training sessions. This type of ongoing training in the school planning process is available to all schools. It is critical for new staff
members if they want to fully understand the process. The principals of the three schools continue to send teachers, both new and veterans to these training sessions. However, all of the teachers in this study felt that the most effective training was done at their school while they were actually involved in the collaborative planning process and that they learned by doing as one teacher stated, "You have to be involved in the process to understand it."

Time

Although no specific questions were asked concerning the time collaborative planning takes, the time issue surfaced again and again during interview items concerning attitude. Collaborative planning takes a lot of time. How different staffs manage their time affected their attitudes. Also when schools first got into collaborative involvement in the school plan, it seemed to require more time than it does now. The schools have streamlined the process and the amount of time spent depends to a great extent on what phase of the Biennial Planning Process the school is in. As the principal in school C reported:

Over the years the teachers have developed their own schedule, set the time to monitor. We set aside time for planning days throughout the year to keep on target. And it is different for different phases. If you are in the first year of the plan, you are spending more time in planning, development, more time brainstorming, getting information back to teachers, more time coming to consensus with what the objectives are. And so they have developed a schedule that they use where individual teachers meet monthly. And we have what is called a coordinating committee, some schools call it a steering committee that meets monthly
and planning days throughout and at the end of each year getting ready for the next year. The second year of Biennial Plan they have gone to quarterly meetings because the plan is in place so all they need to do is to maintain the pace and program. Having reviewed that, now they are looking toward going back to monthly to start the new biennial plan process again. Their meetings are mostly in the mornings, 15 minutes before school. A lot of the extra work is done on planning time, free time, particularly chairmen and people who are chairing committees do it during lunch, during P.E. break and do it on Monday afternoon and a lot of our admin leave is taken for biennial plan planning. P.T.A. supports the biennial plan by providing $5,000 for substitute teachers for various aspects of biennial plan planning.

Teachers at school C reported, "It's real time consuming." When the researcher asked, "still?" they replied:

I think less. I think in the beginning we weren't really cutting it down.

And in the beginning it was like we were real hungry and we took too much on our plates and I think we realized over time that we didn't need to see that much. You could collect a reasonable amount of data. We were pretty overwhelmed.

The teachers in the other two schools also spoke of reducing the time and streamlining the process over the years. Teachers were discussing this among themselves in the focus group:

Don't you feel that when a school is first going into school based management it feels cumbersome, clumsy, taking a lot more time, but we are at a place now where we have gone through the growing pains.

Committee meetings take time.

There have been planning sessions at my house, people have felt time pressures and time constraints and extreme frustration.
Teachers on committees are very conscious of not creating more time consuming work for teachers, so they try and streamline it.

There is a lot of time spent. This time is an investment in our students. Anything after going through a self study looked good though.

After a while it becomes less time consuming. We meet on Monday afternoons or sometimes before school. In the beginning it takes more time, but not now.

One day during the school year in May we have a sub come in and we all go off somewhere and work on the plan.

The time issue was an important issue. Teachers in the focus group wanted to address it and wanted the researcher to know that it had gotten better but that collaborative planning is still time consuming.

**Implementation of the Plan**

When teachers and principals were asked about teaching to the objectives of the plan when only the principal or assistant principal wrote it, or if they thought the plan was being implemented before collaboration, they all agreed that teachers were hardly aware of its existence when they were not involved. After becoming collaboratively involved in the planning process they fully implemented their plan.

A teacher who came to school C from another school stated:

> I was in this school system for four years, two different principals and I didn’t know that there was a school plan until I came here.

The principal of school C further added:

> Before opening this school and when I was the only one that did it at my other school before we got into collaborative groups, they had no idea what the plan was, and they had no idea what the objectives were or
what their part was, the implementation of the plan, how we collected data or how it affected their instructional program.

The principal at school C changed all of that when the opportunity came for her to open a new school and start with collaborative teacher involvement in the school plan from the beginning.

In schools A and B, the implementation of the school plan both before and after collaborative involvement of teachers, the experiences were very similar. Although interviewed separately the two principals and two focus group respondents spoke in collective terms:

I don't think teachers implemented the plan when only I wrote it, because they would say "Annual Operating Plan, what is that?"

Well, frankly when I was a teacher I might have seen the plan and when I was a principal, I might have shared it with my faculty but it wasn't worth the paper it was written on because they had no investment in it . . . . It might have been written by me and the reading teacher, but for the teachers there was no accountability, they never felt a part of it, didn't understand it . . . . They were not aware they were supposed to be implementing a plan.

Before teacher collaboration on the plan, I wasn't aware of the objectives of the plan . . . . Now when we [teacher committees] meet on a monthly basis and talk about it, it keeps it in the forefront of your mind.

You look at it once a month and you get minutes from other committees, so you know where they are.

Before when we didn't write it or talk about it, we were shown it at the beginning of the year and off it went . . . . Now we see it monthly, and we are constantly implementing it because we own what we do.

When you found those little pieces of paper in you mailbox and you had to fill out about at-risk kids, you
were angry. When asked where they came from, you were told, the principal . . . . Now this paperwork is from us, we made up those forms, they came from us . . . . We know why we are filling them out and we better try harder to make our kids make it.

Research Question 2 Summary

Content analysis of qualitative data for attitudes corroborated most of the results of the survey. From the descriptive data of the survey, opinions about time, school priorities and the plan being easier to implement corroborated with teacher interview responses. However, on the survey almost two thirds reported that they did not receive adequate training yet those interviewed felt the training that went along with the initial planning was helpful.

Because all of the focus group participants brought up the issue of time frequently, the researcher interpreted this to mean that it was a concern among a significant number of the teachers who completed the questionnaire. The teachers in the focus groups represented a cross section of the teachers who completed the survey. This probably accounts for a less than overwhelming majority of teachers agreeing positively on attitudinal items concerning training and the amount of paperwork.

All of the teachers felt that the implementation of the plan was much greater now than before collaborative planning. Most teachers were hardly aware of its existence before.
Research Question 3

"What motivates teachers to be collaboratively involved with the school plan?"

As mentioned under research question 2, when teachers were first told that being involved in the school planning process was now part of their job many greeted it negatively. When principals were asked how they motivated teachers to become involved in the planning process or specifically to respond to the question, "How did you convince them that this was a good thing to do?", it came down to a sense of empowerment and with that the Expectancy Theory (Vroom, 1964) from the literature review was illustrated.

"An individual derives satisfaction from those actions that meet those psychological need for self esteem and voluntarily selects an action with the expectancy that his direct behavior will result in an indirect outcome which is desirable and perceived to be important to the individual" (Vroom, 1964). McGregor also speaks of man’s needs shifting to social and egoistic needs if the lower level needs are met by the organization (McGregor, 1960).

Changing paradigms was another important theme in motivating teachers, as Guskey stated "that significant change in teachers’ beliefs is likely to take place only after student learning takes place" (Guskey, 1986). Therefore if student achievement improves and collaborative
involvement in the school plan is perceived as being the reason, then teachers will be motivated to become a part of the process, the "cycle that replicates itself."

McGregor’s (1960) theory Y, that management should arrange conditions so that people can achieve their own goals best by working toward the organization’s goals is addressed through the question asked of teachers, "Are your personal objectives correlated with the school’s objectives?" The answer was that their objectives became the school’s objectives, ownership.

Ownership

Teachers responded to the question about their personal objectives correlated with the school’s objectives:

It comes down to the fact that the B.P. [biennial plan] is teacher planned. These are our objectives; it is not something more to do. It fits right in.

Our personal objectives are right there with the school, because they sprang from us.

You don’t even really need to think about it. You just implement them and make the B.P. useful and adapt it to your own classroom.

Yes, I think my objectives lean towards the school’s goals and objectives. I teach towards those goals. For example, we have students that we identify that are having difficulty with very low levels of math. I have an instructional assistant who takes those children and reinforces what I do in the classroom, kind of gives them that little extra support that they need. So that reinforces what our plan is, to help these children.

People wanted to become involved in the planning process because they wanted to have their own concerns become a part of the school’s concern. They did not want to
carry out a plan that did not spring from their personal needs. They could make their objectives the school’s objectives if they got involved.

**Empowerment**

One teacher spoke of wanting to be in on the planning because she did not want something "done to her" that she was not a part of creating:

I wondered what was going on with the steering committee that met on Monday afternoons in the library. I never asked but when the opportunity came to be a part of it, I joined. Because I wondered what was going on that might be done to me that I’m not aware of.

Principals did not have to convince those teachers whom they knew to possess strong personalities combined with high levels of expertise and professional competency, to join in the initial planning team. Principals knew that these teachers were vying for leadership and influence within the faculty. Their needs were met by giving them the power.

The three principals shared the following:

We let them see that this was very forward looking, on the cutting edge. We won them over by the importance of it and that we were going to write it.

Teachers see things happening because of these meetings. I think that if they did not see things happening they would resent the extra work. The steering committee likes the idea. They are getting their feet wet by being out in front. They go to the area superintendent to present the plan with me. I think that in a couple of years they are going to say to me, "Why do you want to see the superintendent, we wrote it?"

There are a lot of little principals here. They [the teachers] take charge and they know how to do things.
Teachers at school C spoke of increased respect for their principal because of her empowering of teachers:

I think it takes a real secure administrator to have an effective school's project in place where you’re soliciting input all the time and trying to build a consensus and get people to agree with each other. And I think it’s good for everybody’s self esteem. People really have a sense of knowing that what they say . . . their ideas matter.

**Appreciation and Recognition**

When asked of the teachers if their principal really values their contributions to the school planning process, there was an overwhelming yes, and a dialogue of how their principals demonstrate appreciation and gives recognition to teachers’ contributions ensued:

She is a very kind person, always flowers, a glad note, a message on the electronic bulletin board to make us feel good. She values teachers as professionals. All our contributions are noted on our evaluations.

Any types of contributions to the school have always been noted on evaluations.

I’m told it’s important and worthwhile, which is more important probably than being put on the evaluation.

But I think I’d like to see it there. If I didn’t see it there I’d take note that I wanted it there because I have invested a lot of time and effort on it.

And from a principal:

I consider the committee time at a school based management school to be as time consuming as serving on a countywide committee, such as textbook adoption or various instructional committees and I do note it and give credit for all the work they do, particularly if they were a chair or served on the coordinating committee. I also give them recertification points. Our whole committee structure is tied to recertification points, so if you serve as a chair you can earn up to 40 points a year. I think that if you
spend this kind of time you are doing a tremendous service to the school.

Research Question 3 Summary

Content analysis of qualitative data for the variable of teachers' motivation factors corroborated the strongest with the descriptive results of the survey data which very strongly correlated with teachers' perceptions of student achievement. Teachers were motivated to work on the planning process because they perceived it to improve student achievement and the quality of instruction—a cycle that replicates itself.

Teachers' motivation came from a sense of ownership and empowerment which increased their self esteem and their need to be recognized and appreciated for what they do. This corroborated with the current literature especially the research done by Guskey (1986) and Rosenholtz (1985, 1989).

Research Question 4

"Does collaboration work?"

Is the dependent variable, perceived student achievement and improved quality of instruction a result of teachers' collaborative involvement in the school planning process, or stated differently, do teachers and principals see collaboration working? When both teachers and principals were asked if they saw a relationship between the identified evaluation indicators on the plan and student
achievement, their answers were basically yes they did. The principal from school C elaborated:

When you are using standardized tests as an indicator, yes, alternative assessment, somewhat. One of our objectives is alternative assessment. It is coming down the line. I think we are more in tune as to how our identified students are doing and our instructional assistant program is designed around that. When instructional assistants come in, they say "Who are your identified students?" In many ways the B.P. collaborative process has redefined the roles of the instructional assistant. Instead of clerical or hit and miss, they only work with identified students. We have to look at more than test scores because here 95% of our students pass the state literacy test. How do we show an increase from that? When all of our test scores are significantly above the district average then the evaluation criteria becomes a little less significant and we need to look at other ways to measure student performance because in the traditional way, we are already surpassing. Even our targeted students are not in the lowest quartile. We need to look at alternative assessment. We need to look toward performance based assessment.

The teachers from school C concurred:

I am on the academic achievement committee and I think there is a direct relationship between what we have put down as the evaluation components, it puts a focus on instruction and I think a good example is the State Literacy Test this year. Our goal was not to just have students pass, our goal was to have more students pass, but it was also to have higher scores and I think that was very clear to the sixth grade teachers. I think they worked as a real team. One real glaring thing, for them I think was that, in the report from last year we did put in the passing grade of regular ed and special ed students. In the special ed, we’ve been very serious. There was a very disappointing showing of the special ed students. So this year I think there was an extra focus on helping the LD students pass the State Literacy Test, so I think it provided that focus and we did much, much better this year as far as the number of students who passed, but also the students who did well in the regular ed. I think we had some very improved scores. I think that we wanted not only to just be 250 as the passing score, but we wanted students to be scoring 260 or better. That was one of our objectives. I think the teachers did take that
seriously and I think that really improved the instruction that led up to the testing.

The principal from school B responded:

Here the students normally score higher than county average but underachieving students, yes. In sixth grade one of the things we looked at was writing style so that is being addressed for all sixth graders.

Teachers from school A responded:

It is very hard to pinpoint results that are outcomes in social and emotional areas. In the achievement area we are able to quantify. If there's a more positive atmosphere, that's a positive outcome. I think that's measurable.

I do, because if you have given that test the year before, you know what area you have to work on. If your talking about targeted students you focus in that area.

The test makes it more visual. I think that using the test scores as part of your Evaluation Indicator does bring it to your attention, but I think it would get your attention anyway.

You are looking to those Program of Studies math tests. What you test is what you get. We are still deliberating a lot on those. The system wants us to look at certain things. Iowa [Iowa Test of Basic Skills] is on there, we don't teach to that, like P.O.S. [Program of Studies Math Test]. Another thing we look at is grades; will grades improve in elementary school? Grades in elementary school are very interesting. I don't think we're interested in the outcome of what the grades are. It's not a real authentic assessment as if you looked at portfolio writing samples, or Chapter I running records. I think we can get better at this such as where we expect kids to be reading at the end of the year. Like we do through the Reading Recovery Books. We expect them to attain Level 14 at the end of the year. The assessment pieces, we are always working on refining. It's not there. We are always negotiating to be more like how kids learn. What part of the P.O.S. needs to be looked at, the subtest, how we are teaching this. What do we need to put more emphasis on? We need to list as an indicator of achievement a measure that reflects what we teach.
When principals were asked if they thought collaboration worked they not only addressed how they thought collaboration on the biennial planning process related to improved student achievement and improved quality of instruction but added that it worked to achieve a more positive school climate. This was mentioned earlier by the teachers in the Whole School As Community section under Research Question 1. The three principals shared their opinions:

Of course I think so. The more people have the same language, the more we're moving forward on common goals and the less we are spending time in school on things that are less important. Every month we are talking about student achievement and professional development and bringing the community in. You are focusing in on a way as a whole school not just as some people going to all the workshops and coming back and sharing. Everybody knows what is going on. Besides quality of instruction and student achievement it's improved the climate of the school. I see us more and more a team.

I see it a lot in improving student achievement and also in quality of instruction because you are focusing more on objectives. Student achievement, definitely, everything you do in your building centers around identified students. All identified students come to child study and strategies are developed to assist them. Our instructional assistant program is centered around identified students, so we know that automatically they are getting help. Our materials are purchased as a result of the process. It allows teachers to have control over students and that their main focus is instruction. We don’t offer a lot of schoolwide big events like fairs and shows because our main focus is working with kids and what we do every day. What we do every day is more important than putting on shows. I think for teachers, they feel they have control over what they are doing. They make the decisions so when it comes down to whether they made a good or bad decision they have a right to change that. That is the other part of the process. You tell them that there are logical times throughout the cycle process to make changes in what they are doing. The
biennial plan is really a hypothesis of what we think we are going to accomplish. The reality of what we accomplish comes mid cycle, and we say well is this really where we are going? If not let’s change it. It is a fluid process. I think this is what teachers are beginning to realize. Just because we write this plan doesn’t mean that ‘till death do us part.’

I think collaboration is working in that it gives teachers a different way of looking at students, for example at all the services they receive. The process gives the teacher a framework and a focus and most importantly, a schoolwide way of looking at things. 

Research Question 4 Summary

Analysis of qualitative data for the dependent variable, perceived student achievement and perceived improved quality of instruction as a result of teachers’ collaborative involvement in the school planning process corroborated with the survey data. Principals strongly believe collaboration works. They reported that this collaborative process has resulted in their observing and perceiving improvement in the quality of instruction and in student achievement.

Teachers are teaching to the objectives of the school plan, because these objectives were collaboratively chosen by the staff. Students’ achievement has improved as indicated by standardized test scores in two schools and by other alternative indicators of achievement in all three schools since teachers started doing this.

Review of Records

A review of records was conducted on each of the three schools. These records consisted of standardized test
scores, the school's annual and biennial plans and the ethnic
distribution and minority population data. Mobility
data was also looked at.

From the interviews of teachers and principals much information
concerning test scores emerged. Principals and teachers from
schools B and C related that their students performed higher
than the county average on standardized test scores. This was
validated by an examination of these two schools' standardized
test scores from Part of the Picture . . . , a district publication
containing the information and published for each individual
school. This publication presents five years of data on a variety of
indicators in a fashion that encourages data based collaborative
decision making. It also puts these data into perspective, to see
the data as part of a much larger picture.

School A has a totally different population than both
schools B and C, and their test scores reflect this. School A has
a much lower socio-economic status population than schools B and C,
and their Asian, Black, and Hispanic population is steadily increasing
while their white population is decreasing. The school plan
reflects the assessed needs of this school (Appendix A). School A does
not have an English as a Second Language (ESL) program but does
have Chapter I and Headstart programs. Only 25 children out of a
total enrollment of 448 receive gifted and
talented services. School A also has a fairly high mobility rate of almost 31% annually on a September to June basis (Table 7). All of these variables can contribute to low standardized test scores. As these variables increase each year the standardized test scores of school A decrease (Table 8). However by just breaking out the targeted students identified in their biennial plan (Appendix A), the number of identified students scoring below the county average on I.T.B.S. (Iowa Test of Basic Skills) declined slightly (Table 9).

As the principal of school A discussed during the interview, "The school system wants us to look at Iowa scores but we don’t teach to that." This is because teachers now integrate all the Language Arts with the other content areas. Reading is not taught in isolation and reading workbooks are not used. Instead more student writing is done. The Iowa test is geared to reading workbook type items. This fact supports the findings of the declining Iowa Test of Basic Skills scores and further argues the case that more authentic assessment would be portfolio writing samples and running records for language arts.

The teachers and the principal at school A also reported success of their other school plan objectives to meet the diverse needs of students (Appendix A). Staff
Table 7

Annual Mobility Rate of the Three Schools, September to June

<table>
<thead>
<tr>
<th>School</th>
<th>Mobility rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>30.78</td>
</tr>
<tr>
<td>B</td>
<td>16.58</td>
</tr>
<tr>
<td>C</td>
<td>12.37</td>
</tr>
</tbody>
</table>
Table 8

A Comparison of Mobility Rate to National Percentiles of Iowa Test of Basic Skills, School A Grade 4

<table>
<thead>
<tr>
<th>Year</th>
<th>Mobility rate</th>
<th>Language total</th>
<th>Math total</th>
</tr>
</thead>
<tbody>
<tr>
<td>89-90</td>
<td>25.49</td>
<td>51</td>
<td>59</td>
</tr>
<tr>
<td>90-91</td>
<td>27.16</td>
<td>53</td>
<td>59</td>
</tr>
<tr>
<td>91-92</td>
<td>30.78</td>
<td>42</td>
<td>49</td>
</tr>
</tbody>
</table>
Table 9
Numbers of Identified Students From School A Scoring Below the District Average on Iowa Test of Basic Skills, Grade 4

<table>
<thead>
<tr>
<th>Year</th>
<th>Language total</th>
<th>Math total</th>
</tr>
</thead>
<tbody>
<tr>
<td>89-90</td>
<td>18</td>
<td>13</td>
</tr>
<tr>
<td>90-91</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>91-92</td>
<td>14</td>
<td>10</td>
</tr>
</tbody>
</table>
development activities identified in the school plan such as cooperative learning and reading recovery strategies for language arts in the regular classroom were also perceived as improving the quality of instruction, and noted in the final report of the school plan and corroborated the survey and interview data.

Other indicators of student achievement in the Biennial Plan (Appendix A) were report card grades to indicate increases in student achievement. This was based on authentic assessment such as teachers monitoring completion of traditional homework assignments in math and spelling as well as longer term projects. The staff perceived appreciable increases in student achievement as delineated by report card grades on the final report of the plans reviewed.

Schools B and C, as mentioned earlier have a much different population than school A and are very similar to each other. They have higher than the district average in standardized test scores (Table 10), higher socio-economic status with very few minorities, and only 10% of the population at school B attend ESL classes. There are no Chapter I or Headstart programs. A large percentage of students receive gifted and talented services and both schools have fairly low mobility rates (Table 7). All of these variables contribute to higher standardized test
<table>
<thead>
<tr>
<th>School</th>
<th>Year</th>
<th>Language</th>
<th>Math</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>89-90</td>
<td>69</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>90-91</td>
<td>69</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>91-92</td>
<td>71</td>
<td>82</td>
</tr>
<tr>
<td>C</td>
<td>89-90</td>
<td>68</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>90-91</td>
<td>75</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td>91-92</td>
<td>77</td>
<td>82</td>
</tr>
<tr>
<td>District Average</td>
<td>89-90</td>
<td>66</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>90-91</td>
<td>65</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>91-92</td>
<td>65</td>
<td>75</td>
</tr>
</tbody>
</table>
scores (Table 10). All students including the targeted students’ standard scores improved in schools B and C. The principal at school C mentioned the difficulty of evaluating an objective to meet the social and emotional needs of a diverse population. This objective was monitored by teachers. They examined social and emotional Individual Educational Plan goals for special education students. They also looked at disciplinary logs, and counselor and psychologist records to indicate what services have been provided to address these needs. Teachers’ perceptions at the end of the biennial plan reporting period indicated a marked improvement in meeting these needs.

During interviews with teachers from School C, they spoke of the State Literacy Passport test and having a goal of more students passing with a higher score.

I think that was very clear to the sixth grade teachers . . . they worked as a real team, that influenced instruction because one of the things we looked at was writing style so that is being addressed for all sixth graders.

Writing to an assigned prompt is being practiced in the classroom and more attention is being given to grammar and punctuation, because these are the criteria on which the writing portion of the State Literacy Test is scored. The State Literacy Testing Program is a state-required criterion-referenced testing program consisting of separate basic skills tests in reading, writing, and mathematics and the format for writing is to respond to an assigned prompt.
This test is administered to students for the first time in grade six and is designed to measure sixth grade level objectives. Students who fail may take the test again in grades 7 on up. Students who do not pass all three tests will remain ungraded in high school and will not be awarded a regular diploma.

The results were disappointing for the special education population at the end of the first year of the biennial planning cycle at school C. Therefore, the staff addressed this in their revised plan for these at-risk students for school year 1992-93. The result was a very significant improvement (Table 11) in the learning disabilities population.

This revision to the plan was addressed by the principal of school C when she spoke of logical times in the school planning cycle process to make changes, and these changes included a learning disabilities project with revised work plans. The total number of students passing with a higher score also indicated a significant improvement (Table 12).

**Review of Records Summary**

Content analysis of records including standardized tests, biennial plans, ethnic distributions, minority population, and mobility rates were validated by both interview data and survey data. Teachers reported that they did not feel that the Iowa Test of Basic Skills accurately
<table>
<thead>
<tr>
<th>Year</th>
<th>Total number of students</th>
<th>Reading</th>
<th>Writing</th>
<th>Math</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-1991</td>
<td>9</td>
<td>4 (44%)</td>
<td>2 (22%)</td>
<td>5 (55%)</td>
</tr>
<tr>
<td>1991-1992</td>
<td>17</td>
<td>5 (29%)</td>
<td>5 (29%)</td>
<td>3 (18%)</td>
</tr>
<tr>
<td>1992-1993</td>
<td>8</td>
<td>3 (18%)</td>
<td>5 (28%)</td>
<td>1 (6%)</td>
</tr>
</tbody>
</table>
Table 12

School C--Total Student Population Passing the State Literacy Test

<table>
<thead>
<tr>
<th>Subject</th>
<th>1990-91 (%)</th>
<th>1991-92 (%)</th>
<th>1992-93 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>93.1</td>
<td>94.0</td>
<td>96.9</td>
</tr>
<tr>
<td>Writing</td>
<td>95.0</td>
<td>90.2</td>
<td>93.9</td>
</tr>
<tr>
<td>Math</td>
<td>93.1</td>
<td>96.5</td>
<td>97.7</td>
</tr>
</tbody>
</table>

Percent of students passing all three tests: 89.0 87.0 90.0
measures how students are being taught. This is substantiated by the records of declining Iowa scores only in school A. The review of records of school A indicated an increasingly high mobility rate and ESL population. School A’s biennial plan (Appendix A) accurately addressed the needs of this diverse school population. However, even though teachers feel that this test does not accurately measure how students are being taught, the teachers and principals in schools B and C expressed in their interviews that student achievement has improved since teachers began collaborative involvement in the planning process and this is validated by these schools’ steadily increasing Iowa scores.

The qualitative data from the interviews with the teachers and principals from school C regarding the state literacy testing program strongly corroborated with the review of records concerning this testing data. When teachers developed an objective and work plans to focus on the special education population’s improving their passing rate, the outcomes were significant.

Chapter Summary

Teacher survey data, interview data from both teachers’ focus groups and principals, centered around the research questions, along with a review of records provided the multiple process-triangulation necessary to obtain validity.
and give a complete descriptive profile of these three schools.

Eight themes emerged during the interviews with teachers and principals. The exact words of these voices responding to questions, interacting in discussions with each other and with the researcher have been presented. This helped to maintain authenticity and illustrated corroborating viewpoints of the participants who had previously responded to the survey, "Involvement in the Biennial Planning Process." Items on the survey that were common to teachers' motivation had the highest frequencies and percentages for agreement, as did those items dealing with perceived student achievement, followed by levels of collaboration. The perceptions of the teachers and principals of both the quantitative survey data and the qualitative data were further supported by a review of these three schools’ records.
CHAPTER 5

SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND FURTHER RESEARCH IMPLICATIONS

This final chapter serves as a culmination of research designed to examine teachers’ perceptions of the effects of collaborative involvement in the school’s operating plan. Four parts compose this chapter: a summary of the results, the conclusions drawn from the study and tied to the literature, recommendations, and further research implications.

Summary

During the interviews with teachers and principals several key points were raised which appeared to corroborate with the teachers’ answers on the survey and provided a more in depth portrait of teachers’ perceptions of the effects of their involvement in the school operating plan.

In two of the three schools teachers reported that at the beginning of the process they were not sure what their role on the collaborative team was. They shared the misconception that they were to act as a faculty advisory council to the principal, bringing faculty concerns to the principal, rather than being involved in a collaborative planning process. All of the teachers interviewed believed that only by being involved in the process did they then understand it.
Teachers stated that as the school staff became more experienced in the planning process the more streamlined this process became, however collaborative planning is still viewed as time consuming.

Teachers felt strong ownership of the plan because of their increased level of involvement and that by writing it and monitoring it monthly, they felt that the implementation of the plan was much greater than before and that they tried harder for students' improvement. Principals echoed this by adding that before teachers were involved in the planning process, they were hardly aware of the school operating plan's existence.

Another key point that emerged during the interviews was that teachers felt increased respect for an administrator who felt secure enough to have an effective school's project in place where the principal was soliciting faculty input and trying to build consensus and yet was flexible enough to change what just wasn't working. One principal stated that the school operating plan was really a hypothesis of what the school staff thinks they were going to accomplish but the reality of what was accomplished comes mid cycle. Then the staff looked at where they were going and if they were not headed toward their goals, changes were made. The process was very fluid.

Although the results of the regression analysis of the survey data neither confirmed nor failed to confirm the
qualitative data, when looking at these data as purely
descriptive, certain tentative claims may be made. Many
teachers appeared to be motivated to become involved in the
school planning process. These teachers also perceived
improved student achievement since this involvement began.
Teachers' attitudes indicated that many resented the time
and extra paperwork this process takes and felt they did not
receive adequate training in the beginning of the planning
process.

The descriptive data collected from the survey and the
data from the interviews were supported and validated by a
review of records including school plans and final reports,
as well as standardized test scores of two of these schools.
Student achievement has improved since teachers have been
involved in the collaborative planning process as indicated
by standardized scores and by other indicators of
achievement noted in the evaluation component of the plans.

Teachers and principals in these three schools perceive
that the quality of instruction has improved as well as the
overall school climate since teachers have become
collaboratively involved in the school operating plan.

Conclusions
An analysis of the data gathered from this study
reinforces previous research and theories, and also answers
the research questions by adding evidence that teachers
believe that their involvement in the school's collaborative
planning process results in improved student achievement. Principals also believe collaboration works. Teachers and principals perceive students improving because they see evidence that these students know and are able to do, what it is they stated they wanted them to know and be able to do. In other words, objectives are collaboratively agreed on, outcomes are defined, and work plans are implemented, and monitored. This supports Sizemore's study (1986) where principals and teachers collaboratively set explicit operational goals and can improve student performance. There is a strong sense of ownership among the teachers in these schools towards their school plan.

Official records provide further evidence that these three schools, where collaborative involvement in the planning process is in place, student improvement has occurred.

In all three schools teachers were becoming increasingly motivated to want to become involved in the planning process because they saw it as successful—a cycle that replicates itself—that is grounded in Guskey's (1986) process of teacher change. Teachers' needs for professional growth and self-esteem reinforces Vroom's (1964) theory and McGregor's (1960) theory that organizations that are highly effective focus on individuals as both the means to accomplish the organization's objectives and address their psychological needs for well being. Teacher motivation to
become involved in the collaborative planning process was strong where the organization’s success in improving student achievement and quality of instruction was perceived as being strong.

This study also supports Joyner’s (1988) contention that effective schools meet their educational objectives when they promote collaboration among all school publics via participative decision making. Teachers’ perceptions of the different levels of collaborative involvement support this stand. Teachers perceive that the more involved people are at many different levels (administrators, teachers, teaching assistants and parents), the more effective the school is in improving student achievement.

Attitudes, especially those concerning the amount of time this collaborative involvement in the planning process takes and inadequate training and knowledge of the process at the beginning negatively affected teachers perceptions of student achievement.

Teachers and principals believe collaborative involvement in the biennial planning process is effective not only in improving student achievement and in quality of instruction but in ways that improve the school’s climate. Teachers and administrators develop new levels of trust and appreciation of each other. This conclusion is consistent with Armstrong and Trueblood’s (1985) study where trust was considered the most important value in a collaborative
school. Teacher isolation is reduced as teachers collaborate in many different ways. Teachers develop a schoolwide perspective and feel a sense of "the whole school as a community." Teachers are empowered to take on new leadership roles and principals have learned to participate as well as lead school efforts. This supports Deal's (1987) stand that effective principals lead their collaborative teams but do not control the process because teachers are empowered to do this. To quote again what one teacher stated during the focus group:

When you found those little pieces of paper in your mailbox and you had to fill them out about at-risk kids, you were angry. When asked where they come from, you were told, the principal... Now this paperwork is from us, we made up those forms, they came from us... We know why we are filling them out and we better try harder to make our kids make it.

This quote demonstrates teacher empowerment, and also clearly illustrates how principal isolation is reduced through the example of principals getting requests for information from teacher committees. This example supports Alfonso and Goldsberry's (1982) belief that principals must "halt the spread of teacher isolationism." Above all, this quote summarizes how teachers working together on a plan that they developed try harder to make it work.
Recommendations

The following recommendations are offered with respect to the data in this study. They include the following:

1. The Office of Staff Development should work with the Office of Research and Evaluation to plan training seminars on consensus building. Teachers and principals reported great difficulty with the process in the beginning of their collaborative planning endeavors. Also, the school system or individual schools could tap the many corporations who are school/business partners in the district’s partnership program for help in this area. This recommendation is supported by Deming’s Point 5 where "ongoing education and training of all employees are a prerequisite for achieving constant improvement (Deming, 1982, p. 23)."

2. Individual schools may wish to utilize one or two of their teacher in-service days at the beginning of the year to have the entire staff observe one of the more effective schools engaging in collaborative planning at the other school’s site. (A teachers and principal panel for question and answer time would also be of help.)

3. It is imperative that the entire school staff be involved in this process, not just a few chosen by the principal. This planning will not be effective unless everyone on the staff has a voice in the process. Commitment by the entire staff is necessary for the
collaborative planning process to be effective. This is also consistent with Deming’s (1982) "Six Principles."

4. Many schools could learn from school C about time management. Teachers who give of their own time should be compensated by receiving recertification points. The P.T.A. could become involved in supporting the biennial planning process by allocating funding for substitutes to release teachers to be able to go off and do their committee work.

5. More parent and community education needs to be done to show evidence that biennial planning on the school site or "site-based management" benefits our students. Reports of these results should also be made to the school board.

6. Central Office needs to clearly define and assign accountability in collaborative schools. Is the principal held accountable for goals collaboratively developed at the school site or only for those goals identified as an area of focus based on the school district’s operating plan? If true teacher empowerment or site based management exists, then schools need to be monitored and held accountable for goals identified at the school site, rather than only on goals and objectives identified at the Central Office level. Does ultimate accountability rest only with the principal? Does shared decision making mean shared accountability for the staff? These issues need to be clarified.
7. Schools in this district that have not begun collaborative involvement of the staff in the school plan should move in this direction.

Further Research Implications

This study has raised issues that warrant additional research. Recommendations for further research include the following:

1. The survey portion of this study be replicated with an instrument having higher reliability of the scales. Perhaps the survey could be revised to include more items and include a larger sample.

2. Case studies of other schools that have been in this process for several years and who feel ready to make the link between the collaborative planning process and student outcomes.

3. Exploration of how schools with very diverse student bodies and high student mobility collaboratively plan with their unique students' needs in mind, and how their indicators of student achievement would not necessarily be standardized test scores.

4. Exploration of the process that schools take to arrive at collaboration. Is there a significant variance in the process? Can a model be developed for developing collaboration?
5. Exploration of to what degree collaboration is institutionalized in a school. What ongoing pressures help maintain or mitigate against ongoing collaboration?

6. A study of how other school districts handle the accountability issue in site-based management schools. How do they assign accountability when decisions are made collaboratively? Are these decisions truly collaborative or does collaboration really mean that the principal makes the ultimate decision after collaborating and consulting with teachers and therefore only the principal is truly held accountable?

In summary, numerous opportunities exist for further research in connection with collaborative planning/site-based management and student achievement. More elementary teachers need to expand their role, moving from being isolated classroom teachers to include the roles of collaborative planner, researcher, staff developer and communicator--instructional leader. However, changes in teachers' roles and school organizational change simply for the sake of change should never occur. Only changes that lead to improved student achievement and quality of instruction should occur.
REFERENCES


Joyner, E. T. (1988). Promoting school success through collaboration and coordination, Atlanta,
American Psychological Association (ERIC Document Reproduction Service No. ED 304 761).


APPENDIX A

BIENNIAL PLAN
Appendix A
Biennial Plan--School A

Objective I: Improve the performance and/or effort of students with emphasis on the identified students

Identified students will fall within one of the following criteria:

. Those students who fall below the 41 percentile on selected tests (DRP, ITBS) and do not already receive special services

. Students who are not meeting expectations based on additional data such as: anecdotal records, report cards, POS tests, portfolios, teacher observations, etc.

Evaluation:

. Comparing the same identified students on a yearly basis, an upward trend will be evident in the rating scales on the teacher checklists which include: social behavior, study skills, math and/or language arts skills.

. An upward trend in report card grades will be evident in the area(s) in which the student was identified. (Performance)

. An upward trend in effort grades, on the report cards, will be evident in the area(s) in which the student was identified. (Effort)

Work Plans:

. Evaluate and redesign the teacher checklist to most effectively monitor student performance in educational programs.

. Develop the concept of portfolio assessment through staff development activities and voluntary teacher participation.

. Engage in proactive staff development leading to instructional strategies for improved student achievement including: learning styles, cooperative learning, computer technology, and behavior management.


. Continue integration of the total curriculum and request that area and county resource personnel be scheduled to meet with us to support this process.
Objectives II: Meet the social and emotional needs of a diverse student population

Evaluation

- A log will be available which documents time and interactions between FLEX, preschool, GT, and general education students.
- Social and emotional IEP goals of special education students will be achieved or re-evaluated for inclusion in the following year’s program.
- Documentation will indicate a reduction in disciplinary actions.
- Screening committee agendas, Student Reflection Sheets, counselor and psychologists records will indicate that services have been provided to address social/emotional needs.
- A pleasant and positive learning environment will be evident throughout the school.

Work Plans

- Develop a documentation procedure that tracks the interaction between FLEX, preschool, GT, and general education students.
- Provide staff development in the following areas:
  - helping students deal effectively with stress
  - motivating students and improving their self-concepts
  - providing students with opportunities to assume responsibility
  - training general education teachers to meet the needs of mainstreamed special education students.
  - assisting teachers and staff in learning and implementing strategies to meet the social/emotional needs of students.
- Continue documentation of disciplinary actions and use of the Student Reflection Sheet for purposes of comparison with the 1990-91 baseline data in the following areas:
  - physical confrontations with staff
  - physical/verbal confrontations with students
  - unacceptable verbal language
  - unacceptable cafeteria behavior
  - noncompliance/disrespect to staff
  - destruction of students/school property
  - bus behavior (All the above, plus disregarding safety patrols and safety violations)
  - other
- Develop a data collection process to summarize records of screening committee, administrators, counselor and psychologist to document services that have been provided to meet the social/emotional needs of students.
- Provide activities which promote positive school-wide interaction.
Objective III. Continue to promote the collaborative decision-making process

Evaluation

By June of 1992 a plan will be proposed to the staff for the inclusion of parental and community involvement.

Reports and summaries from the operating plan committees will document school-wide involvement by staff.

Work Plans

Extend an open invitation to staff to observe the collaborative team meetings.

Continue to enhance the collaborative team process by rotating team membership.

Develop a plan for parental and community involvement.

Include collaborative concepts as part of all student and staff committees.

Organize and disseminate information to the staff by utilizing central bulletin board system.
APPENDIX B

TEACHER SURVEY INSTRUMENT
Appendix B
Involvement in the Biennial Planning Process--Faculty Opinion Survey

PART 1
Involvement in the Biennial Planning Process
Faculty Opinion Survey

Directions: Please respond to the items below by marking the appropriate letter in the space provided next the corresponding number. Please use the number 2 pencil provided. Your responses will be kept strictly confidential.

1. Please indicate the school in which you are presently working.
   A                              B                              C

2. Please indicate the number of years you have worked in your present school?
   1-2   3-4   5-6   7+
   A                             B                             C   D

Directions: Please respond to the statements below using the following responses:

<table>
<thead>
<tr>
<th>Strongly</th>
<th>Agree</th>
<th>Strongly</th>
<th>Not Enough</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>B</td>
<td>Agree</td>
<td>D</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>D</td>
<td>E</td>
</tr>
</tbody>
</table>

3. The level of teacher collaboration on the plan has noticeably increased over the last several years.

4. Being involved with writing the plan has made the plan easier to implement.

5. Collaborative involvement in the biennial planning process has resulted in my feeling ownership in the plan.

6. Teachers in our school usually teach to the objectives of the school's biennial plan.

7. Collaborative involvement of the teachers in the planning process has led to more collaboration in other professional areas.

8. I feel that I have not received adequate training in the biennial planning process.

9. Working on the biennial plan has been a professional growth experience for me.

10. I feel that student achievement in this school has improved over the last several years.

11. In our school almost every teacher has some involvement in the collaborative planning process.

12. Because of staff collaboration on the plan, school priorities are clearer.

13. My contributions to the plan have been viewed by my colleagues as important.

14. Most teachers in this school believe that all students can learn.

15. Relatively few of our teachers are involved in the biennial planning process.

16. The main effect of cooperative planning is more paperwork for teachers.

17. My contributions to the plan have been viewed by the principal as important.

18. Students perform at higher than expected levels in this school.

19. Many teachers in this school are very involved in the biennial planning process.

20. I want to be involved in the biennial planning process.

21. Teachers teach to the school system Program of Studies objectives in this school.

108
APPENDIX C

FOCUS GROUP INTERVIEW QUESTIONS WITH TEACHERS
Appendix C
Focus Group Interview Questions with Teachers

1. Did you teach to the objective of the school plan when only the principal or assistant principal wrote it?
2. What was your reaction when you were told that being involved with the school planning process was part of your job?
3. Did you receive training before you began the process?
4. Would you outline how the collaborative planning process evolved in your school?
5. Do you feel that the Annual Operating Plan or Biennial Plan is a more meaningful document since teachers started to collaborate on it? Why or why not?
6. Do you feel that your principal really values your contribution and notes this in your evaluation?
7. Do you see a relationship between the identified evaluation components of the school plan and student outcomes based on these components?
8. Are your personal objectives correlated with the school’s objectives?
9. Can you tell me some ways in which you collect data for the plan?
10. Some people say that this collaboration is just giving lip service. What do you think about that?
APPENDIX D

STRUCTURED INTERVIEW QUESTIONS FOR PRINCIPALS
Appendix D
Structured Interview Questions for Principals

1. Do you feel that the teachers taught to the objectives of the school plan when only you or your assistant principal wrote it?
2. Can you tell me what the teachers' initial reaction was to their being involved in the planning process?
3. How did you convince them to give this a try?
4. Can you outline how the collaborative process has evolved in your school over the last several years?
5. Do you feel that you have a more meaningful and viable document now?
6. What importance do you give to teachers' contributions in the collaborative process?
7. Do you feel that now there is more of a relationship between the identified evaluation components of the school plan and student outcomes based on these evaluation components?
8. In your opinion, does collaboration work?
VITA

Rita Neville Taylor

I. General Information

Home Address: 9019 Edgarpark Road
               Vienna, Virginia 22182

Business Address: Great Falls Elementary School
                 701 Walker Road
                 Great Falls, Virginia 22066

Telephones: (703) 847-4646 (Home)
            (703) 759-2221 (Work)

II. Educational Background

Certificate of Advanced Graduate Studies 1992 Virginia Polytechnic Institute and State University


B.S. 1965 College Misericordia, Dallas, Pennsylvania

III. Professional Educational Experience

1993--Present Assistant Principal, Great Falls Elementary School, Fairfax County Public Schools

1989--1993 Assistant Principal, Hutchison Elementary School, Fairfax County Public Schools

1984--1989 Principal, Queen of Apostles Elementary and Middle School, Alexandria, Virginia, Catholic Diocese of Arlington

1979--1984 Teacher/Coordinator, Chapter I By-Pass Program in Virginia Public Schools, Catholic Diocese of Arlington

1978--1979 Fourth Grade Teacher, St. Charles School, Arlington, Virginia

113
<table>
<thead>
<tr>
<th>Year</th>
<th>Position and Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976--1978</td>
<td>Kindergarten Teacher, Department of Defense Dependents' Schools, Gaeta, Italy</td>
</tr>
<tr>
<td>1974--1976</td>
<td>Spanish Teacher, 8th Grade, Monterey Peninsula Unified School District, Monterey, California</td>
</tr>
<tr>
<td>1970</td>
<td>Second Grade Teacher, Department of Defense Dependents' School, Rota, Spain</td>
</tr>
<tr>
<td>1967--1968</td>
<td>Third Grade Teacher, Prince George’s County Public Schools, Maryland</td>
</tr>
</tbody>
</table>