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THE EFFECT OF SUPPORTIVE INTERVENTIONS ON FIRST-YEAR TEACHER
EFFICACY

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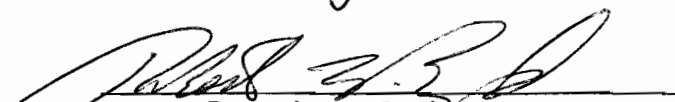
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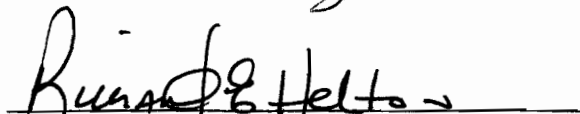
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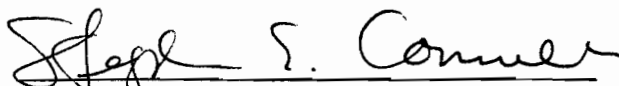


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ABSTRACT

Purpose of the Study. The purpose of this study was to assess the effect of supportive interventions on first-year teacher efficacy. Two Rand Studies (1976 & 1977) and a study by Kilgore and Kozisek (1989) provided the theoretical framework for this investigation.

Procedures. One hundred and forty-four first-year teachers in the Indianapolis Public Schools received a questionnaire to participate in this study. Ninety-five teachers responded to the questionnaire. The response rate for the teacher questionnaires was 66%. The questionnaire was divided into five parts. The first part measured teacher efficacy. This was determined by answers given to questions regarding the confidence level of first-year teachers in areas such as classroom discipline, instruction, assessment, and public relations. The second part measured teacher support from people other than the mentor. This was a measure of school climate. The third part measured instructional guidance. Instructional guidance was defined as the feedback given to teachers on their performance. The fourth part was a measure of principal support. Teachers rated how often each of fifteen behaviors was associated with principals. The fifteen behaviors included discussion on district and school policies, classroom observation, invitations to school gatherings, suggestions on assessment, assistance with teaching strategies, demonstration of lessons, assistance with administrative paperwork, encouragement to attend professional

development activities, and assistance with classroom management. The fifth part was a measure of mentor support. Teachers again rated how often each of same fifteen behaviors was associated with mentoring. Demographic data were collected , analyzed , and reported. Descriptive data were tabulated and analyzed to determine whether mentor support, teacher support, principal support, and instructional guidance had an effect on first-year teacher efficacy.

Findings. Four hypotheses were tested in this research project. Statistical analysis included descriptive statistics, Pearson correlation, and regression analysis. The building Environment or climate (support), instructional guidance, and principal support had an effect on teacher efficacy. There were significant relationships found between efficacy and support, instructional guidance, and principal support. However, there was not a significant relationship found between efficacy and mentoring.

This information suggests that mentoring support cannot increase first-year teacher efficacy and teacher efficacy is related to the building climate (teacher support), instructional guidance, and principal support. Furthermore, additional item correlation analysis reveals that a sense of accomplishment, job satisfaction, and sufficient materials do significantly impact first-year teacher efficacy

The results of this study should be of interest to both district and school level administrators. Since teacher efficacy is related to teacher retention and student achievement, district and school level administrators should make every effort to create a professional environment that values collegiality and positive school climate.

TABLE OF CONTENTS

	PAGE
APPROVAL SHEET	ii
ABSTRACT.....	iii
TABLE OF CONTENTS	v
LIST OF TABLES	viii

Chapter

1. INTRODUCTION

Statement of the Problem	3
Purpose of the Study	4
Significance of the Study.....	6
Research Questions	6
Hypotheses.....	7
Definitions	8
Delimitations.....	9
Limitations.....	9
Organization of the Research.....	10
Summary of the Study	10

2. REVIEW OF RELATED LITERATURE

Introduction.....	11
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Philosophical Trends	14
Theoretical Trends	16
Empirical Research Trends.....	20
Professional Development	22
Challenges Facing Beginning Teachers	25
Induction Programs	28
Principal's Role.....	30
3. RESEARCH METHODS	
Introduction.....	34
Null Hypotheses.....	35
Data Source.....	36
Instrumentation	36
Population Description	38
Procedures for Implementing the Data Collection.....	38
Data Collection Techniques.....	41
Level of Measurement.....	41
Statistical Analysis	41
Summary.....	43
4. ANALYSIS OF DATA	
Introduction	45
Hypotheses.....	46
Description of the Population	48

Descriptive Data of the Five Constructs.....	49
Hypotheses Testing	58
Item Correlation Analysis.....	63
Summary of Findings.....	65
Summary of the Five Constructs	65
Summary of Hypotheses Testing	66
5. SUMMARY, CONCLUSIONS, RECOMMENDATIONS	
Summary of the Study.....	68
Summary of Approaches and Findings.....	70
Summary of Findings and Conclusions.....	70
Recommendations.....	72
Recommendations for Future Research	76
REFERENCES.....	79
APPENDIXES.....	94
A. CORRESPONDENCE.....	95
B. QUESTIONNAIRE.....	102

LIST OF TABLES

Table 1: Construct I – Teacher Efficacy	50
Table 2: Construct II – Mentor Support	52
Table 3: Construct III – Principal Support.....	54
Table 4: Construct IV – Teacher Support.....	56
Table 5: Construct V – Instructional Guidance	57
Table 6: Results of Testing Ho1	59
Table 7: Results of Testing Ho2	60
Table 8: Results of Testing Ho3	61
Table 9: Results of Testing Ho4	62
Table 10: Item Correlation Analysis	64

Chapter 1

THE PROBLEM

Introduction

Since the release of *A Nation at Risk* in 1983 by the National Commission on Excellence in Education, ways to improve the quality of teachers continue to be debated and studied across the nation. The failure to staff the nation's classrooms with qualified teachers has received much needed attention.

Teacher quality is a complex phenomenon, and there is little consensus on what it is and how to measure it. There are, however, two broad elements that most observers agree characterize teacher quality: (1) teacher preparation and qualification, and (2) teaching practice (Ingersoll, 1996).

As states and school districts begin to focus more intensively on issues of teacher quality, the challenges of new teacher orientation, adjustment, effectiveness, accountability, and attrition are becoming increasingly urgent. In *Learning the Ropes*, Recruiting New Teachers, Inc. (RNT) reports that America will need to hire some 200,000 K-12 teachers annually due to rising student enrollment, accelerated teacher retirement, and class size reduction. Despite more induction programs than ever before, the capacity of these programs is not keeping pace with

rising numbers of newly hired teachers, leaving many novices without support.

Stone (1987) reports that approximately 15 % of the new teachers leave after their first year of teaching, compared to an overall teacher turnover rate of six percent. This means that the first-year teacher turnover is two-and a-half times more likely to leave the profession than his or her more experienced counterpart. The results of these new teachers leaving the profession are classrooms of children suffering from inadequate and disjointed learning experiences, wave upon wave of substitutes or new recruits, and the lasting impression on teaching as an undesirable career (Stone, 1987).

Beginning teachers leave their undergraduate institutions armed with facts and theories about teaching and its practices. They are confident, almost idealistic, about their ability to instruct, to make curriculum decisions, and to manage classrooms of students. Veenam (1984) finds that new teachers soon suffer from “reality shock” realizing that their student teaching experiences, while valuable, have left them little prepared for the “minute-to minute” decisions that they must now make in the classrooms (p. 143, 145).

According to the Texas Education Agency, attrition rate in South Texas averaged 25% for teachers in their first three years of teaching (T.E.A., 1999). Within this time period, teachers develop from a survival stage to an adjustment stage and hopefully the impact or mastery stage of effective teaching (Huling-Austin, 1999). For teachers to reach an impact, or mastery stage of effective teaching, it is critical to prevent the loss of teachers in the early years of their development.

Several factors contribute to teacher attrition, including inadequate training, lack of feedback, the multitask nature of teaching, insufficient salaries, and work environment (Terry, 1997). To make the matter even worse, new teachers are isolated from their colleagues and may be reluctant to share their difficulties with them (Valli, 1992). Expected but unable to perform as veterans, these neophytes lose confidence in themselves (Veenman, 1984). They adopt teaching practices which help them survive, but are not the best practices for teaching and learning (Bush, 1983; 1977; Newcombe, 1988).

In order to prevent the departure of new teachers before, or when they have reached the impact stage of development, more research is needed to identify reasons why novice teachers change their behavior, their attitudes, and their personality, all of which may lead to departure from the teaching profession (Veenman, 1984).

Strong support for new teachers can mean the difference between staying in or leaving the profession entirely. If we are to address the burgeoning teacher shortage, teacher induction must become a top priority for school districts, state education agencies, and the nation as a whole.

Statement of the Problem

Preparing and retaining quality teachers is essential for improving our schools. Since research has established that approximately 40% of beginning teachers leave the profession during their first three years of teaching, it is clear that school districts, legislators, and universities must work together to find ways to better support and retain beginning teachers.

One of the reasons so many teachers leave is because the teaching profession has been slow to develop a systematic way to induct beginners into the complexities of a job that demands hundreds of management and instructional decisions every day. In order to retain new teachers, we must introduce them to the profession in a manner that promotes self-esteem, competence, collegiality, and professional structure (Colbert & Wolff, 1992).

Teacher induction researchers have consistently cited that mentor teachers' preparation and training determined the success of the programs (Bey & Holmes, 1990; Brooks, 1987; Huling-Austin et al., 1989). Veenman (1984) reported that many beginning teacher support programs failed to prepare teachers for the "reality shock" of the classroom (p. 143).

A strong sense of teacher efficacy has been found to be essential to the survival in the teaching profession. A study by Glickman and Tamashiro (1982) reported that teachers leaving the profession had a significantly lower sense of efficacy in first-year teachers through fifth-year teachers.

In light of research up to date, this study examined the effect of supportive interventions on first-year teacher efficacy. Five constructs including teacher efficacy, mentoring support, principal support, teacher support, and instructional guidance were investigated.

Purpose of the Study

The purpose of the study was to assess the effect of supportive interventions on first-year teacher efficacy. In order to determine the effect of supportive

interventions, like mentoring, on first-year teacher efficacy, one hundred and forty-four first-year teachers in the Indianapolis Public Schools answered questions on efficacy determined by their confidence level in sixteen areas. Then, they responded to questions regarding the frequency of supportive interventions received from their mentor, as well as the frequency of supportive interventions and instructional guidance received from persons other than their mentors.

These teachers were given a questionnaire to complete in the summer of 2002 as they finished their first year of service in the Indianapolis Public Schools. The goal of the questionnaire was to assess first-year teacher efficacy based on their confidence in areas such as school policy, school climate, classroom management, and instruction. Teacher efficacy refers to the sense of control that teachers believe that they have over their teaching environment, and the extent to which teachers believe that they can influence student achievement. Teachers also responded to questions concerning from whom, other than their mentor, they received instructional support and guidance. They were asked to respond to questions regarding frequency of supportive interventions given by the assigned mentor, principal, and other staff members. Various demographic data were collected, analyzed, and reported.

With the alarming number of beginning teachers leaving the profession, recruitment and retention becomes a critical challenge for most school districts. In order for mentoring and teacher induction to be effective, school districts must investigate and include effective supportive interventions that assist in the development of a strong sense of efficacy for first-year teachers.

Significance of the Study

Linda Darling-Hammond (2000) found in her research that those teachers who enter teaching with little mentoring support tend to leave the profession more quickly, overwhelmed by the complexities that they are poorly armed to meet.

Preparing beginning teachers is a developmental process. Proctor (1984) developed a model of the teaching/learning process that highlighted the importance of teacher expectations for student learning. Ashton (1984) replaced the term “teacher expectation” with “teacher efficacy” and concluded that teachers with efficacy embrace the belief that they can make a difference in student learning.

This study was designed to contribute to the body of literature surrounding “teacher efficacy” and its relationship to mentoring, teacher support, principal support, and instructional guidance. It was intended to provide school districts data upon which to base revisions in the design and/or assessment of supportive interventions in order to increase first-year teacher efficacy.

Research Questions

Is there a significant relationship between teacher efficacy and mentoring? Is there a significance relationship between teacher efficacy and teacher support? Is there a significant relationship between teacher efficacy and instructional guidance? Is there a significant relationship between teacher efficacy and principal support?

Hypotheses

Two Rand studies completed in 1976 and 1977 on the concept of teacher efficacy provided the theoretical framework for this investigation of supportive interventions and efficacy. In these studies (Armor et al., 1976; Berman, McLaughlin, Bass, Pauly & Zellman, 1977), the teacher's sense of efficacy was measured by responses to questions about his/her belief and ability to influence student achievement. In addition, the teacher's sense of self-efficacy was found to be the most important determinant to change. The finding of these studies was confirmed in an investigation by Ashton, Webb, and Doda (1983) which determined that a teacher's attitude about his/her ability to control student achievement is directly correlated with the level of achievement attained by their students.

A strong sense of teacher efficacy is essential to survival in the profession. Thus, this study was designed to explore how mentoring, teacher support, instructional guidance, and principal support impacted the efficacy of first-year teachers. The hypotheses tested were based on the framework provided by the two Rand studies. The following null hypotheses were considered in this research:

Ho1: There is no significant relationship between teacher efficacy and mentoring.

Ho2: There is no significant relationship between teacher efficacy and teacher support.

Ho3: There is no significant relationship between teacher efficacy and instructional guidance.

Ho4: There is no significant relationship between teacher efficacy and principal support.

Definitions

Supportive interventions are the actions provided which help teachers adjust to teaching (Durham, 2000).

Mentoring is defined as the pairing of an experienced teacher with a beginning Teacher (Durham, 2000).

Instructional guidance is the feedback given to teachers on their performance (Durham, 2000).

Instructional support refers to the teaching climate in the building (Durham, 2000).

Beginning teacher is defined as a teacher who has had no previous teaching experiences and is beginning his/he first full year of service in the district carrying a valid license (Durham, 2000).

Professional development is the change over time in the behavior, knowledge, images, beliefs, or perceptions of novice teachers (Durham, 2000).

Efficacy is defined as the teacher's confidence in his/her ability to control the teaching environment (Durham, 2000).

Induction is the transition from preservice to the first year of professional teaching experience (Durham, 2000).

Delimitations

The delimitations of the present study existed in the following manner:

1. This study only tested the hypotheses at the end of first year teaching.

It did not present a multi-year profile.

2. This study only addressed the first-year teachers as defined by the Department of Education in the State of Indiana.
3. This study was not designed to differentiate the results based on the time period the first-year teachers were hired.
4. This study did not investigate the components of an effective training program for mentor teachers or the pairing process utilized by school districts.
5. This study did not take into consideration the effect of class size or working conditions.

Limitations

The limitations of the present study existed in the following manner:

1. The study was influenced by the limitations imposed by the use of a questionnaire. The study was limited based on the truthfulness of the responses provided by the first-year teachers.
2. The subjects involved in the study were from a set population, not randomly selected.
3. The fact that first-year teachers might mature independent of the induction program was not included in the study.

Organization of the Research

Linear regression analysis was used to explore the relationship between supportive interventions and first-year teacher efficacy. The questionnaire, using a Likert-type scale, provided a set of quantitative data. Demographic data such as

grade level, subject area taught, genders of beginning teacher, and the ages and teaching experiences of the mentor were also collected.

Summary and Organization of the Study

This study is divided into five chapters. Chapter One provides the introduction to the study, a statement of the problem, the purpose of the study, significance of the study, research questions, null hypotheses, definition of terms, organization of the research, delimitations, and limitations.

Chapter Two presents a review of related literature, philosophical trends in teacher induction, theoretical trends in teacher induction, empirical trends in teacher induction, professional development, and principal's role in teacher induction.

Chapter Three presents information about the population sample, research methods, and instruments used. Chapter Four provides findings to answer the hypotheses and research questions posed in Chapter One. Chapter Five presents a summary of the findings, conclusions, and a discussion of recommendations.

Chapter 2

REVIEW OF RELATED LITERATURE

Introduction

This review of the literature examines related research conducted to date on teacher induction and teacher efficacy. The first part of the study is an investigation of the term “mentor,” philosophical trends, theoretical trends, and empirical research trends on teacher induction. The second part of this study examines professional development, challenges facing beginning teachers, induction programs, and principal’s role in the induction process.

Mentor

Mentoring is not a new concept. It has survived for more than 3,500 years, arising from Greek mythology. The actual origin of the term “mentor” has its roots in Homer’s Greek epic poem, *The Odyssey*. In the myth, Odysseus, a great royal warrior, is preparing to leave his family and kingdom to fight in the Trojan War. He is warned that, once gone on this mission, he might not be able to return for 20 years. Odysseus asks a trusted, wise and learned friend, Mentor, to oversee his possessions in his absence.

The entrusting of his beloved son, Telemachus, is symbolic of the esteem in which Mentor is held. Mentor faithfully watches over Odysseus’s interests and

advises Telemachus. According to Clawson (1980), this advisement was not confined to the martial arts, but was to include every facet of Telemachus's life -- physical, intellectual, spiritual, social, and emotional development. Thus, "mentor" has come to mean an experienced and trusted counselor. Anderson and Shannon (1988) concluded from *The Odyssey* that modeling a standard and style of behavior is a central quality of mentoring and that mentoring is an intentional, nurturing, insightful, supportive, and protective process.

History provides us with examples of the caring, nurturing, and sometimes challenging relationships between an individual and his/her mentor. Twentieth-century examples of this kind of relationship include the novelist, Thomas Wolfe, whose mentor was his high school teacher and legendary Babe Ruth, who without the encouragement of a Catholic school teacher, might not have survived the world of baseball. Thus, the word "mentor" has become synonymous with wise teacher, counselor, encourager, philosopher, confidante, and friend (Walker, 1992).

Levinson (1978) writes that in early adulthood, the mentoring relationship is one of the most significant relationships that a person may have. Great mentors extend the human activity of care beyond the bounds of the family, and they inspire us to reach beyond ourselves (Daloz, 1999).

As mentoring has become regarded as a business asset in almost all professions, interest in the topic of mentoring continues to increase in industry, nonprofit organizations, government, and education (Zachary, 2000). Medical residences, law associates, and even rookie baseball players receive extended training, development, and mentoring before taking on the responsibilities as full professionals.

Following the lead of businesses and other professions, school districts have adopted mentoring by pairing a beginning teacher with a veteran teacher for a period of one year or more, as a method of induction to the teaching profession (Debolt, 1992; Haines & Mitchell, 1985; Huling-Austin, Barnes, & Smith, 1985). Indeed, realizing the obligation they have to beginning teachers, many states have legislated programs in order to bridge the gap of theory into practice (Neuwiler, 1987). Many of these legislated programs included a mentoring component. Some research indicates that beginning teachers who are mentored are more effective in their early years, since they learn from guided practice rather than being dependent upon trial-and-error alone (Neuwiler, 1987). It was also reported that mentored novice teachers tend to focus on student learning sooner and are less likely to leave teaching in the beginning years (National Commission on Teaching and America's Future, 1996).

The structure of teacher induction programs and the underlying conceptualization of teaching truly differs among districts and states. Some induction programs are based upon "effective teaching" criteria relating to direct instruction for mastering skills and academic content as measured by students' achievement on standardized tests. Other programs underscore the complexities of teaching and the need for a dynamic, regenerative school environment (Weiss & Weiss, 1998).

Furtwengler's (1994) analysis of various state-level beginning teacher programs identified four major recurring themes. These themes included the use of support teams, mentor teachers, the development of training programs for participants, and the determination of summative evaluation decisions. Furtwengler concluded that the use of teams and experienced personnel to provide support for beginning teachers

changed the school climate from one of teacher isolation, to one of increased professional collaboration.

Philosophical Trends

One reason many teachers leave is that teaching as a profession has been slow to develop a systematic way to induct beginners gradually into the complexities of a job that demands hundreds of management decisions each day. In business, interns and trainees are people who earn a stipend by participating under expert supervision. In the teaching profession, however, interns and trainees have full teaching responsibilities. They not only have to attend classes during their spare time, but often have limited expert supervision (Schulman & Colbert, 1988). Furthermore, first-year teachers typically possess three characteristics (Littleton and Littleton 1988). First, they become confused workers when they cannot think of ways to improve their teaching. They are also highly motivated and coachable. Finally, they tend to be very idealistic. These characteristics of first-year teachers point to the critical need for formal and research-based teacher induction programs.

If we want to retain new teachers, we must introduce them to the profession humanely, in ways that promote self-esteem, competence, collegiality, and professional stature. We must develop a more gradual method of induction into teaching within a supportive and collaborative environment (Borko, 1986; Gehrke, 1987). Today, beginning teachers are expected to come to the classroom with knowledge, dispositions, and performance capabilities enabling them to reflect on their own instructional strategies and interactions with students (Cady, 1998).

The first year of teaching is a frustrating time of self-doubt for many. In the study by Bergmann et al. (1976), 57% of the beginning teachers reported that they had changed their original student-centered teaching behaviors into a more authoritarian way. Adams (1982a, 1982b) studied the classroom behavior over a 6-year period beginning with student teaching and continuing through 5 years of teaching experience. He concluded that the greatest change was between the first and third year of teaching.

It is estimated that 30 % of beginning teachers leave the profession during the first two years (Schlechty & Vance, 1983). Moreover, fledgling teachers frequently experience burnout and a period of ineffectiveness (Littleton & Littleton, 1988). In order to successfully meet the needs of new teachers, we must begin by understanding their concerns in four major categories: emotional, instructional, resources, and managerial (Odell, 1989). New teachers often wonder if they will survive the first year as they grope for teaching strategies and materials and fret over continuous discipline problems. Deal and Chatman (1989) suggest that it would be more beneficial to deal with pedagogy and the philosophy, culture, and history of the individual school. In so doing, the new teachers could become insiders or at least feel “at home” (Moran, 1990).

Interstate New Teacher Assessment and Support Consortium (INTASC) has formalized the expectations for teacher reflection, which INTASC has argued that teacher reflection in a collaborative environment enhances professional development and planning. Teachers gain insight from the experiential knowledge of their colleagues as their practice is confirmed and honed. In order to be effective,

Reynolds (1992) describes four characteristics that new teachers must bring to their jobs: (a) be knowledgeable about strategies and techniques for creating and sustaining a learning community; (b) be knowledgeable about subject matter; (c) possess the skills and ability to use and apply these techniques; and (d) have the disposition to be reflective upon their practice and the student's responses to their teaching. Reynolds concluded that a heightened sense of teacher efficacy through reflective practices is critical to the creation of a supportive professional environment for new teachers as well as experienced teachers.

Theoretical Trends

Two Rand studies done in 1976 and 1977 on the concept of teacher efficacy provided the theoretical framework for this investigation of supportive interventions and efficacy. In these studies (Armor et al., 1976, Berman, McLaughlin, Bass, Pauly & Zellman, 1977) the teacher's sense of efficacy was measured by responses to questions about their belief in their ability to influence student achievement. In these studies, teacher efficacy was found to be the most important determinant to change.

The results of the Teacher Efficacy Study conducted by Ashton, Webb and Doda (1983) indicate that teachers differ in their efficacy attitudes, and these differences are reflected in teacher behaviors and students' performance. Four contexts that enhance teacher efficacy include teacher education programs, beginning teacher socialization practices, school organization, and parent-teacher relations (Ashton, Webb & Doda, 1983). Their interviews with teachers revealed that feelings of efficacy was difficult to maintain because uncertainty, isolation, a sense of powerlessness, and the lack of

adequate economic rewards and societal recognition threatened teachers' sense of professional self-esteem. Ashton (1984) reports that there are eight dimensions to the development of teacher efficacy: A sense of personal accomplishment, positive expectations for student behavior and achievement, personal responsibility for student learning, strategies for achieving objectives, positive affect, sense of control, sense of common teacher/student goals, and democratic decision-making.

The theoretical foundation of self-efficacy is found in the social cognitive theory developed by former APA president (1974) and current Stanford professor Albert Bandura (1977, 1997). Social cognitive theory assumes that people are capable of human agency, or intentional pursuit of courses of actions, and that such agency operates in a process called triadic reciprocal causation. This causation impacts its members, determines what we come to believe about ourselves, and affects the choices we make and actions we take. Central to Bandura's (1997) framework is his concept of self-efficacy. He defines self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required producing given attainments" (p. 82, 83). Self-efficacy beliefs are characterized as the major mediators for our behaviors, and importantly, behavioral change (p. 82, 83).

In the past twenty-five years, Bandura's other work continues to develop and defends the idea that our beliefs in our abilities powerfully affect our behavior, motivation, and ultimately our success or failure (cf. Bandura, 1982, 1986, 1993, 1997). The belief in one's educational self-efficacy is related to the academic performance and self-regulated learning (cf. Hackett, 1995; Pajares, 1997; Schunk, 1991; Zimmerman, 1995).

Woolfolk and Hoy (1990) note in their research that teacher's sense of efficacy has a consistent relationship with the behavior or learning of students. In fact, teacher efficacy was predictive of achievement on the Iowa Test of Basic Skills (Moore & Esselman, 1992). Watson (1991) even observed greater achievement in rural, urban, majority black, and majority white schools for students of efficacious teachers. Coladarci (1992) also observed higher professional commitment for efficacious in-service teachers.

Durham (2000) states that teachers with a low sense of efficacy often feel frustrated and discouraged about teaching, have low expectations for student achievement, have negative feelings about teaching, lack knowledge about successful teaching strategies, and have a sense of futility about teaching. Teachers with a strong sense of efficacy, on the other hand, believe they positively impact student learning, and they have control over their own environment

Clearly, the idea of teacher efficacy needs to be closely examined as it relates to the teachers' belief in their ability to influence student achievement and behaviors (Durham, 2000). The implications of teacher efficacy can be far reaching in the area of professional development in support networks designed for beginning teachers. School districts can benefit from hiring teachers who have or can develop a high level of efficacy.

Bandura (1977) suggested that efficacy could be developed by successful performance, vicarious experience, and verbal persuasion; therefore, a teacher's sense of efficacy would be strengthened by successful teaching experiences. Observing the successful performance of others can validate the teacher's confidence that they, too,

can accomplish similar tasks. Teachers' beliefs about their personal abilities can be further raised by communication with credible models (Bandura, 1986). School districts must nurture the development of a strong sense of efficacy among beginning teachers through a strong induction program that pairs a beginning teacher with a competent experienced mentor.

Teacher induction researchers have consistently suggested that mentor teachers need preparation and training in order to be effective (Bey & Holmes, 1990; Huling-Austin et al., 1989). Odell (1990) suggested that mentor teachers need training related to the purposes of the induction programs including training in school district philosophy, needs, and priorities, district policies and operating procedures, working with the adult learner, stages of teacher development, and concerns and needs of beginning teachers. Training in clinical supervision, classroom observation, conferencing skills, teacher reflection, and fostering self-esteem and self-reliance in the novice teacher should also be a part of mentor teacher's development.

In his research on beginning teacher support, Little (1981) identifies collegiality and continuous improvement as the two norms that are necessary in order to build strong support networks for new as well as experienced teachers. Sprinthall & Thies-Sprinthall (1983) confirms that adults learn more readily when they have the opportunity to interact with peers and beginning teachers need frequent opportunities to share and solve problems with other first-year teachers.

Hall (1982) points out that induction programs should contain three information sources: the community, the school, and the teaching profession. He concludes that all three must be introduced to the beginning teachers, with the emphasis on

teaching being a life-long learning profession.

The intent of all induction programs is to transform a student teacher into a competent career teacher. Schlechty (1985) suggests that signs of effective induction programs can be observed based on the attitudes and behavior of the faculty and administration in their support of school norms and the general conformity of teacher performance to those norms. Schlechty (1985) emphasizes that new hires in any field are hired with the expectation that they will “survive” the induction process and start on their way to full-term careers.

Empirical Research Trends

Teacher induction has consistently shown to be effective in stemming teacher attrition especially when effective mentoring support is a part of the continuation of the skill development for beginning teachers (NYSED, 1991; Bullard, 1998). The preponderance of literature throughout the 1980s and 1990s has focused on mentoring with regard to the issue of program descriptions, implementation tactics, selection procedures, roles of the mentor and protégé, training process, and the formulation of an incentive program to encourage and reward mentors. Noticeably absent has been the inclusion of information dealing with the evaluation of these programs, and how they are judged in regard to their effectiveness in retaining teachers in the profession.

Are new teachers more effective after a mentoring program in their first year of teaching? Are there commonalities among the mentoring programs that are deemed successful? If so, what are they? Many studies have been done on the mentor's and

protégé's perceptions and on various aspects of the mentoring relationship (Kamper, 1992; Houston, McDavid & Marshall, 1990; Summers, 1987; Veenman, 1984; Vonck, 1995). The findings in these studies are not conclusive; therefore, there are current legislative actions in over thirty states seeking to standardize and formalize mentoring and teacher induction programs (Huling-Austin, 1989).

It is clear that beginning teachers need careful and systematic assistance during the induction phase of their career (Berliner, 1985; Johnston and Ryan, 1983; Veenman, 1984). Teaching seems to be the only profession where the beginner becomes fully responsible from the first working day and is expected to perform the same tasks and duties as a 25-year veteran. According to Enz (1991), we give new teachers a complex puzzle, complete with a frame and all the pieces, but with very few clues as to what the whole picture should look like. The new teacher spends his or her first year desperately trying to learn by trial and error how the pieces fit together.

With the high dropout rate among beginning teachers, it is imperative that we train mentors in helping beginning teachers to develop their personal skills and to become more self-confident if they are to survive. Those who have a strong self-concept and are able to rely on their own strength somehow make it through those trying times, while others lack that inner strength and resilience, and are also unaware of their own personal need to build support agents, and succumb to stress and disillusionment that often culminates in burnout and subsequent failure (Veenman, 1984).

Professional Development

In order to meet the challenging demands of their jobs, high-quality teachers must be capable and willing to continuously learn and relearn their trade. Professional development and collaboration with other teachers are strategies for building educators' capacity for effective teaching, particularly in a profession where demands are changing and expanding daily. Traditional approaches to professional development (e.g., workshops, conferences) have been criticized for being relatively ineffective because they typically lack connection to the challenges teachers face in their classrooms, and they are usually short term.

Research suggests that unless professional development programs are carefully designed and implemented to provide continuity between what teachers learn and what goes on in their classrooms and schools, these activities are not likely to produce any long-lasting effects on either teacher competence or student outcome (Fullan & Steigelbauer, 1991).

In addition to quality professional development, peer collaboration has also been recognized as important for teachers' continuous learning. The 1998 FRSS (Fast Response Survey System) conducted by the National Center for Education Statistics (NCES) indicate that increased time spent in professional development and collaboration activities was associated with the perception of significant improvement in teaching. Moreover, teachers who participated in grade level common planning periods with a team of teachers at least once a week were more likely to report that participation improved their teaching significantly (52% versus 13%).

To fully understand the effectiveness and the power of peer collaboration, we

must first examine effective models of teacher development. Sparks and Loucks-Horsley (1989) in their research identified five models of teacher development: training, individual guidance, observation and feedback, involvement in an improvement process, and inquiry. They further concluded that teacher induction programs also needed to reflect the five models of development so that new teachers would have the opportunity to engage in an ongoing study of the teaching and learning process.

Katz (1972), in a study of preschool teachers, defined four stages of development: survival, consolidation, renewal, and maturity. The novice teacher begins his/her career with little knowledge of students, wondering if he/she can make it through the day. By the end of the first year, the teacher begins to look at children as individuals and tries to relate a strategy to a child's problem. By the end of the third or fourth year of teaching, the teacher begins examining "who is doing what" with methods, materials, approaches, or techniques. When the teacher reaches maturity, by the end of the fifth or sixth year, he/she begins to question his/her philosophies and brings personal insight, a broader perspective, and realism to teaching.

Berlinger's (1988) model of teacher development also focused on the level of "understanding" that underlies teaching behavior. During the first stage, with little understanding of students, the first-year teacher consciously labels each aspect of teaching. During the second stage, the teacher has a vague idea of what to expect from students. Consequently, there is little more flexibility in his/her classroom. They now have a better feel for the students' capabilities, the components of lessons, and interpreting students' reactions. Reaching the third stage, the teacher

distinguishes between important and unimportant events in the classroom. He/she becomes much more prescriptive. When a teacher becomes proficient during the fourth stage, teaching becomes intuitive. The teacher can “read” the classroom and predict with accuracy what comes next. During the fifth stage, the expert stage, teaching has become second nature and appears effortless, as though the teacher operates on automatic pilot.

Vonck (1995) believes that professional development for beginning teachers should be divided into three dimensions: knowledge and skills, personal, and ecological. He concludes that pedagogical content knowledge, classroom management skills, and teaching skills are important for beginning teachers to understand in order to create and maintain an effective teaching and learning environment. The ecological dimension refers to the acculturation of the beginning teacher to the school context. It is difficult for beginning teachers to think of themselves as “the person in charge.” Vonck reports (1995) that teachers do not like to see themselves as policemen and that they identify themselves with their students. He calls this change in self-concept from student to teacher, the personal dimension of professional development. Vonck (1995) claims that the first-year of teaching also means the transition from adolescence to adulthood. Like the personal dimension, the ecological dimension of a teacher’s professional development is tied to the acculturation of the beginning teachers to the school context.

Keeping in mind that beginning teachers enter classrooms with a simplistic view of students and they are concerned first and foremost about their survival, Staton and Hunt (1992) conclude that mentor teachers must provide support and assistance to

novices by helping them to think with more flexibility, preparing them for the realities of beginning teaching, and coaching them on best practices in teaching.

The work of many researchers on professional development of veteran teachers and novice teachers can guide us in the designs of teacher induction programs. The future culture of the school will be fashioned largely by how well professional development systems evolve. School districts must be responsible for the academic, and social health of their personnel, especially their beginning teachers.

Challenges Facing Beginning Teachers

For decades, the transition from college supervised teaching to independent classroom teaching has posed problems for novice teachers (Ryan, 1970). Requirements and expectations in independent classroom teaching are so numerous and varied that they overpower the novice teacher. Beginning teachers have a difficult time understanding that they are not students any longer, but have become “teachers.” This transition is very difficult for a first-year teacher to internalize.

Literature is replete with case studies and anecdotes that reflect adjustment difficulties faced by teachers entering the profession (Stone, 1987). To complicate matters, most first-year teachers tend to be both idealistic in their thinking and unrealistic in their expectations of independent teaching. Consequently many of these first-year teachers become easily disillusioned and frustrated. Some suffer symptoms of heightened stress and anxiety (Johnston and Ryan, 1980).

Ryan (1979) offers the following speculations about the problems of beginning teachers as a group: (a) teachers have difficulty in their first year because they are essentially under trained for the demands of their work; (b) there are not clear

selection criteria in teacher training; and (c) beginning teachers have had a general training and are not trained for specific jobs in specific schools.

Besides being in an initiation process into the profession, the first year of teaching is also an initiation into the adult world with its responsibilities. New teachers with lower levels of idealism felt more capable of handling classroom problems than those with higher levels of idealism (Griffin, 1983). In the study by Taylor and Dale (1971) 73% of the principals in secondary schools and 53% of the principals of the primary schools reported that beginning teachers had problems with discipline. The problem with discipline also had high priority in the perceptions of the principals in the studies by Anderson (1963), Penrod (1974), and Tisher et al. (1979).

Myers (1967) found that administrators considered problems with classroom procedures and management as the major causes of unsuccessful teachers. Vittetoe (1977) noted that when supervisors were asked to identify one or two overriding causes of failure, they named the following characteristics: lack of control, personality clash, immaturity, lack of organization, and lack of confidence.

Besides classroom discipline, beginning teachers, according to their principals, primarily had problems with dealing with differences between students, motivating students, teaching slow learners, organizing classes, assessing students' progress, and devising schemes of work.

The studies by Anderson (1963), Penrod (1974), York (1967), Williams (1976), Taylor and Dale (1971), and Tisher et al. (1979) revealed great similarities between the problems experienced by beginning teachers and the problems of beginning teachers as perceived by principals. Williams (1976) also found a correlation of .56

between the perceptions of problems areas experienced by beginning teachers and their principals' perceptions. Fitzgerald (1972) on the other hand, reported considerable differences in the perceptions of problems as perceived by beginning teachers and principals.

Fuller & Brown (1975) poses three distinguishable kinds and stages of concerns. The concerns in the first phase are those about one's adequacy and survival as a teacher, class control, being liked by pupils, and being evaluated. The second phase includes concerns over teaching situation. These are concerns about limitations and frustrations in the teaching situation, methods and materials, and mastery of skills. The third phase reflects concerns about pupils, their learning, their social and emotional needs, and relating to pupils as individuals. Data collected by Adams, Hutchinson, and Martray (1980) and Adams and Martray (1981) in a developmental study during student teaching and first-, third-, and fifth-year teaching, supported Fuller's theory.

Veenman (1984) in a review of 83 different studies found that discipline ranked first in perceived teacher problems. Motivating students, dealing with individual differences, student assessment and evaluation, lack of preparation time, isolation, lesson planning, and a lack of collaboration were among the highest ranking problems.

Research on learning to teach and beginning teacher fears have great implications for the design of induction and mentoring program. A characteristic of beginning teachers that continued to be ignored in the induction literature was the unrealistic optimism. In fact, a study of 118 students at the University of Arizona found

that students in the teacher preparation programs tended to believe that they would experience less difficulty than the “average first-year teacher” on 33 different tasks (Weinstein, 1988). This finding has great implications for pre-service and induction programs in that it suggests that novice teachers leave pre-service programs and enter the profession believing that “teaching is not all that difficult” (Weinstein, 1988, p.33).

Even though we know generally what challenges beginning teachers, we still know little about the person-specific and situation-specific nature of these challenges. In-depth, comprehensive developmental studies of the beginning teachers are needed in order to fully understand the cognitive and affective processes that characterize the transition into teaching (Veenman, 1984). McDonald & Elias (1983) also concluded that the alignment between the components of beginning teacher support with the personal characteristics of beginning teachers and the social settings of schools can be very beneficial.

Induction Programs

Weiss and Weiss (1998) reported that the structure of teacher induction programs and their underlying conceptualization of teaching differed among districts. Some induction programs were based upon “effective teaching” criteria relating to direct instruction for mastering skills and academic content as measured by student achievement on standardized tests. Other programs underscored the complexities of teaching and the need for dynamic regenerative school environment that rely on a broad base of knowledge to inform teachers’ behavior. In the California New Teacher Project, the observed difference across the project in the intensity of support

and instruction had a great impact on new teachers' perception of teaching and their performance in the classroom. Not only the frequency, but the quality of support, is important for beginning teacher success.

Linda Darling-Hammond (1997) noted in *Doing What Matters Most* that the proportion of new teachers who have gone through an induction program in their first year of teaching has more than tripled over the last decade. In her report, Darling-Hammond highlighted the two-year Beginning Teacher Support and Assessment (BTSA) in the New Haven Unified School District in California. The program included: (1) an induction plan written for each new teacher; (2) specialist, site mentors, and partner teachers who model lessons for the new teachers; (3) the site mentors also hold monthly site meetings, schedule release time for focused meetings; (4) partner teachers who work with beginning teachers on lesson plans, grading issues, preparing for parent conferences; (5) professional development sessions; and (6) scheduling for release time and budgeting for materials.

Darling Hammond's example shows that teacher induction programs should reflect a range of delivery systems and strategies. While no delivery system or strategy is necessarily superior to another, adequate planning and implementation of a multi-pronged set of activities should have a higher chance of meeting broad policy goals for teacher induction than replicated strategies not tailored to their context.

Kilgore & Kozisek (1989) studied the effects of a planned induction program on first year teachers. Teachers College, University of Nebraska, Concordia Teachers College, and Doane College, are part of a statewide consortium, developed and implemented a first-year teacher support program from the higher education

perspective. The data collected and analyzed appeared to build a rather convincing picture of the tenuous life of a first-year teacher, even when the teacher was provided with a college-based support program. They also found that the number of teachers leaving the profession would be higher if it were not for the extremely high level of self-confidence and high expectations that a beginning teacher has. These teachers believed in themselves, although they did not always receive the feedback to confirm their beliefs. This efficacy, real or imagined, appeared to be a necessary ingredient in the makeup of a successful novice teacher.

Kilgore & Kozisek's (1989) study confirmed that the influence of the school environment appeared to be a powerful socializing force on first-year teachers. The principal was found to be a major force in helping to make the transition from student to teacher a successful one. The needs of first-year teachers appeared to change from the beginning of the year. Beginning teachers need to be provided with the opportunity for continuous support based on their needs in order for them to grow and develop to their fullest potential.

Induction programs with sustained feedback in collaborative environments have been shown to be valuable. New teachers who spend their first year in collaborative school environments are likely to have higher morale, be more committed to teaching, and plan to remain in the profession (Weiss & Weiss, 1998).

Principal's Role

Brock and Brady (1998) found that the principal's role in the induction of beginning teachers has been largely ignored. Although principals are called on to be the instructional leaders, the research provides little information for principals to use

in meeting the challenges of beginning teachers. They reported that perceived problems as reported by the beginning teachers were similar to those reported by the principals. They further reported that the main difference lies in the length and comprehensiveness of the induction process provided by the principals. Most principals reported that they provide a fall orientation, mentors, and evaluations. Teachers, on the other hand, reported a need for a yearlong induction program that included mentors.

The beginning teachers and principals in Brock and Brady's study were in agreement on several issues such as the nature of first-year teachers' problems, the importance of fall orientation, and the helpfulness of mentors. But, the beginning teachers clearly identified two issues that the principals overlooked: the importance of the principal's role in the induction process and the beginning teacher's need for assistance throughout the first year.

In some school districts, beginning teachers have a brief orientation to the new school and soon afterwards are set adrift (Wallings, 1994). This is the beginning of their sojourn in the isolation chamber known as the classroom. Principals can end the sense of isolation by visiting beginning teachers' classrooms regularly. Constructive feedback on the teaching and learning processes unfolding in the beginning teachers' classrooms is also essential to their growth and development, and their sense of efficacy (Hope, 1999). In the California New Teacher Project, the observed difference across the project in the intensity of the support and instruction had a great impact on new teachers' perception of teaching and their performance in the classroom.

Principals must be willing to assume the role of master teachers and commit time to assist beginning teachers in order for these teachers to benefit fully from school-based induction activities (Wilson, Ireton, & Wood, 1997). Since collegiality is recognized as a powerful mechanism for teachers' improvement and the enhancement of teacher retention, principals should focus on promoting collegiality in their schools (Wallings, 1994). Collegiality, moreover, has benefits beyond the professional development of beginning teachers; it can have a positive impact on the overall school culture. Wallings (1994) concludes that a collegial team consisting of veteran teachers and principals provide a powerful support network for beginning teachers.

Most importantly, principals can monitor and/or adjust the assignments of beginning teachers by making sure that beginning teachers are not assigned to large numbers of students with chronic behavior, attendance, and learning difficulties (Hope, 1999). Beginning teachers are set up for failure if principals fail to pay close attention to the difficulty levels of their assignments.

Hope (1999) concluded that if principals neglect to provide instructional and emotional support to beginning teachers, the beginning teachers will undoubtedly find that support from others who may not demonstrate and exude the best teaching qualities and professional habits. A principal's attention and interventions can be critical in counteracting negative influences impacting beginning teachers.

The first year of teaching, many believe, is the most critical one because it determines to a significant degree if a person will remain in teaching and what type of teacher that person will become. School-based induction programs consisting of a

collegial support team of principals and teachers show great promise in keeping competent and committed beginning teachers in the profession.

Chapter 3

RESEARCH METHODS

Introduction

The purpose of this study was to assess the effect of supportive interventions on first-year teacher efficacy. Teachers responded to a questionnaire about their confidence level, and about the frequency of mentoring support, support from others, and instructional guidance. This was accomplished by a quantitative research method.

Overall, the design involved the following basic procedures:

1. One hundred and forty-four first-year teachers in the Indianapolis Public Schools were invited to participate in the study.
2. Five constructs were included in the study: teacher efficacy, teacher support, instructional guidance, principal support, and mentor support. A questionnaire containing all five constructs was distributed to the participating teachers. The questionnaire used in this study was modeled after the instrument that Alvah M. Kilgore and Julie A. Kozisek designed when they did the study on the effect of a planned induction program on first-year teachers in 1989.
3. Data were collected through the administration of questionnaires.
4. Statistical analysis was done to determine the summated mean scores of

individual items in each of the five constructs: efficacy, mentoring, teacher support, instructional guidance, and principal support.

5. Linear regression correlation with independent one-tail test was conducted to test the null hypotheses by correlating the summated mean score of construct I (teacher efficacy) with the summated mean scores of construct II (mentor support), construct III (teacher support), construct IV (principal support) and construct V (instructional guidance). The level of significance was set at .01. The statistical procedures were all performed using the SPSS computer program.

6. Item analysis was done to identify items in construct II (mentor support), construct III (principal support), construct IV (teacher support), and construct V (instructional guidance) that were significantly related to construct I (teacher efficacy).

Null Hypotheses

This study tested the following null hypotheses:

Ho1: There is no significant relationship between teacher efficacy and mentoring.

Ho2: There is no significant relationship between teacher efficacy and teacher support.

Ho3: There is no significant relationship between teacher efficacy and instructional guidance.

Ho4: There is no significant relationship between teacher efficacy and principal support.

Quantitative data was collected and analyzed with appropriate statistical

procedures to retain or reject each null hypothesis.

Data Sources

One hundred and forty-four teachers were included in the study. All of them were first-year teachers in the Indianapolis Public Schools in 2001-2002 school year. All schools with grades configurations of kindergarten to five or kindergarten to eight, six to eight, and nine to twelve were included.

Instrumentation

Data collection was accomplished by administering a questionnaire. The data collection instrument was modeled after a questionnaire used in a research study conducted by Carole Durham in her study of first-year teachers in Kansas City, Missouri in 2000. Carole Durham's instrument was designed by Alvah M. Kilgore and Julie A. Kozisek during their study on the effect of a planned induction program on first-year teachers in 1989.

In March, 2002 the researcher in this study obtained written permission from Carol Durham for the replication of her study. Written permission also was obtained from Dr. Kozisek to use her original survey instrument in April 2002. It was not possible to obtain permission from Alvan M. Kilgore because he was deceased.

Part one of the survey instrument contained areas identified by first-year teachers as areas of difficulty (Kilgore & Kozisek, 1989). The ratings on the sixteen areas represented the competency level of first-year teachers. The items included

classroom discipline, management, motivating students, dealing with individual differences, evaluation of students, relationships with parents, organization of the classroom, organization of time, teaching techniques, subject matters, planning and organization, paperwork, first day of school, use of curriculum guides communication with administrators, colleagues, students, and parents, and relationships with administrators, colleagues, and students.

Part two of the instrument focused on working conditions as defined by instructional guidance and teacher support. Instructional guidance came from other teachers, administrators, grade/department chairs, in-service training, college coursework/experiences and the appointed mentor. Teacher support came from parents, other teachers, administrators, mentor, having sufficient materials, an environment that is conducive to professional development, feeling of accomplishment, level of job satisfaction, and workload.

Part three of the instrument dealt with principal support, and part four dealt with mentor teachers support. The areas of support were identical in part three and four. The areas of support included talking about district policies, talking about school policies, encouragement to attend district wide professional development opportunities, allowing to observe teaching, invitation to school gatherings, providing in-class assistance, observing teaching, helping with administrative paperwork, providing feedback on teaching, demonstrating lessons, assisting with professional development plans, providing time to meet with other new teachers, assisting with teaching strategies, and assisting with classroom management.

An approval to conduct the study of 144 first-year teachers in the Indianapolis

Public Schools was obtained during the summer of 2002. A mailing list was compiled based on the identified first-year teachers during 2001-2001 school year. These teachers participated in the research by responding to a questionnaire.

Population Description

First-year teachers during 2001-2002 school year participated in the research. These first-year teachers began their teaching career in the fall of 2001 in the Indianapolis Public Schools.

A copy of the questionnaire and a letter explaining the purpose of the study were mailed to each of the one hundred and forty-four first year teachers during the week of August 12, 2002. Second mailing was accomplished through faxing a gentle reminder as well as a second copy of the questionnaire to the participants' schools on August 27, 2002. In order to maintain confidentiality, no identifier was included on the questionnaire. A return envelope, addressed to the researcher was included.

Procedure for Implementing the Data Collection

Five constructs were measured in this study. They were beginning teacher efficacy, mentoring support, principal support, instructional guidance and teacher support. Efficacy (level of confidence) was the outcome variable. Mentoring support, principal support, instructional guidance, and teacher support were the predictor variables.

The variables were measured by responses given by the first-year teachers to statements on a questionnaire. Teachers responded to statements on a four-point

scale with response values ranging from “high level of confidence” to “no confidence” or from “high level of support” to “no level of support.” A three-point scale was used to illustrate responses value ranging from “often” to “never.”

The five constructs measured included:

I. Efficacy

Efficacy refers to the sense of control that teachers believe that they have over their teaching environment. Teachers with a high sense of efficacy believe that they directly influence student achievement. Feelings about their ability to manage, motivate, plan, execute, and individualize instruction are also indicative of teacher efficacy.

This construct was measured in Part I (Items 1-16) of the questionnaire. This section contained questions that refer to the level of confidence that teachers had with respect to various decisions that must be made on a daily basis in the classroom.

Questions 1-3 referred to managing student behavior. Questions 6-7 referred to knowledge of subject matters, techniques and methodologies. Questions 8-10 referred to the ability to organize and manage time.

Questions 4, 5, 11, and 12 referred to lesson planning for and evaluation of individual students. Questions 13 to 16 referred to the ability to relate and communicate with various groups.

II. Mentoring

Mentoring referred to the pairing of an experienced teacher with a beginning teacher. The mentor’s role is to work with the beginning teacher, providing supportive interventions and actions that help a teacher adjust to the teaching

profession. In the state of Indiana, every first-year teacher was assigned a mentor beginning in 1987.

Mentoring support was measured through the use of fifteen questions in part IV of the questionnaire. Questions 1, and 2 concerned policy and procedure induction. Questions 6, 8, 9, 10, 11, 12, 13, 14, and 15 concerned instructional assistance given. Questions 5 and 13 referred to the issue of collegiality. Questions 4, 7, and 11 referred to observing the mentor demonstrating lesson for the protégé. Question 3 referred to district staff development for mentors.

III. Principal Support

In Part III, first-year teachers responded to principal support in the areas of discussing district and school policies and philosophy in Questions 1 and 2. Question 3 assessed principal's participation in a district wide staff development designed for beginning teachers. Question 4 assessed the principal support in encouraging beginning teachers to observe others. Questions 5 and 13 concerned principal support in creating collegiality. Questions 6, 7, 10 and 11 assessed principal support in providing in-class assistance, observation, feedback, and lesson demonstration. Questions 9 and 12 dealt with assistance with paperwork and professional development plan.

IV. Teacher Support

This construct was measured in Part IIA of the questionnaire. In this part, questions 1-4 referred to the source from whom the teachers received support and encouragement for the job; questions 5-9 referred to the teaching environment.

V. Instructional Guidance

Questions 1-6 in Part IIB measured instructional guidance. Questions 1-3 and 6 referred specifically to the people from whom the teacher received guidance and advice for teaching. Questions 4-5 referred to in-service training or college coursework as the source of instructional guidance and advice.

Data Collection Techniques

First, a scale was summated from the responses to the items in each of the five sections of the instrument. Part I contained questions that were designed to measure teacher efficacy based on teacher's confidence level in targeted areas. Part III contained questions that measured principal support. Part IV contained questions that measured mentor support. The responses to questions in Parts IIA and IIB were measures of teacher support and instructional guidance, respectively.

Level of Measurement

All of the variables in this study were measured at the interval level. Demographic data were collected (gender, grade level taught, age, age and years of teaching experience of mentor) to describe the participants as well as their mentors.

Statistical Analysis

This study was based on testing the relationship between teacher efficacy (outcome) and four predictor variables: mentoring support, principal support, teacher support, and instructional guidance. All the hypotheses were tested with linear

regression correlation analysis.

The first hypothesis, “there is no significant relationship between teacher efficacy and mentoring” was tested by applying linear regression analysis. The correlation was achieved by correlating the summated mean scores of teacher efficacy and mentoring.

The second hypothesis, “there is no significant relationship between teacher efficacy and teacher support” was tested by applying linear regression analysis. The correlation was achieved by correlating the summated mean scores of teacher efficacy and teacher support.

The third hypothesis, “ there is no significant relationship between teacher efficacy and instructional guidance” was tested by applying linear regression analysis. The correlation was achieved by correlating the summated mean scores of teacher efficacy and instructional guidance.

The fourth hypothesis, “there is no significant relationship between teacher efficacy and principal support” was tested by using the linear regression analysis. The correlation was achieved by correlating the summated mean scores of teacher efficacy and principal support.

Item analysis was accomplished by correlating the summated mean scores of each individual item in mentoring, teacher support, instructional guidance, and principal support with the overall summated mean scores of teacher efficacy. This correlation analysis was designed to identify which items in constructs II, III, IV, and V had the highest correlation with teacher efficacy.

Demographic data gathered from the instrument were used to describe the

population, age of respondents, number of males and females, and number of elementary and secondary teachers. Mentor teaching experience as well as mentor age was also reported.

By utilizing SPSS (statistical computer software), it was possible to obtain valuable data from descriptive analysis as well as regression analysis. Data were obtained from teacher responses to the questionnaire. The questionnaire was administered during the summer of 2002 to one hundred forty-four first-year teachers in the Indianapolis Public Schools.

The questionnaire was divided into five parts. Teachers responded to statements of teacher efficacy in Part I of the questionnaire on a four-point scale from “high level of confidence” to “no confidence.” In part II, teachers responded to questions of teacher support and instructional guidance on a four-point scale ranging from “much support” to “no support”.

Part III addressed questions that related to principal support. Part IV dealt with mentor support.

Demographic data were collected on both the teacher respondent and his/her mentor. The number of respondents in each of the categories determined that statistical analysis of these groups was possible. Therefore, all measurements in this study were at the interval level.

Summary

In this chapter, the design components were outlined and described. Those components were as follows: introduction of research methods; the null hypotheses;

data sources; instrumentation; population description; the data collection procedures and technique ; level of measurement; and statistical analysis.

The purpose of the study was to assess the effect of supportive interventions on first-year teacher efficacy. First-year teachers answered questions about their level of confidence, and the frequency of supportive interventions received from their mentor and their principal. The frequency of supportive interventions and instructional guidance received by persons other than their assigned mentor was also addressed.

Chapter 4

ANALYSIS OF DATA

Introduction

The purpose of this study was to assess the effect of supportive interventions on first-year teacher efficacy.

One hundred and forty-four first-Year teachers in the Indianapolis Public schools were given a questionnaire to complete in August of 2002. The questionnaire asked them questions regarding their efficacy in various areas: policy, school climate, classroom management, and instruction. Teachers responded to questions concerning from whom they received instructional support and guidance. They also answered questions of frequency of supportive interventions given by the assigned mentors and principals.

Overall, the design involved the following basic procedures:

1. One hundred and forty-four first-year teachers in the Indianapolis Public Schools were invited to participate in the study through completing a questionnaire.
2. Five constructs were included in the study: teacher efficacy, teacher support, instructional guidance, principal support, and mentor support. A questionnaire containing all five constructs was distributed to the participating teachers.

The questionnaire was modeled after the instrument Alvah M. Kilgore and Julie

Kozisek designed when they conducted the investigation on the effect of a planned induction program on first-year teacher in 1989.

3. Data were collected through the administration of questionnaires.
4. Statistical descriptive analysis was used to determine the summated mean scores of the individual items in all five constructs: efficacy, teacher support, instructional guidance, principal support, and mentor support. The overall summated mean score of each construct was obtained as well.
5. Linear regression correlation with independent one-tail test was used to test the null hypotheses by correlating the summated mean score of teacher efficacy to the summated mean scores of teacher support, instructional support, principal support, and mentor support. The level of significance was set at .01. All statistical procedures were performed by using the SPSS computer program.
6. Correlation analysis was done to identify items within construct II (teacher support), construct III (instructional guidance), construct IV (principal support), and construct V (mentor support) that were significantly related to construct I (teacher efficacy).

Hypotheses

The following null hypotheses were tested:

- Ho1: There is no significant relationship between teacher efficacy and mentoring.
- Ho2: There is no significant relationship between teacher efficacy and teacher support.
- Ho3: There is no significant relationship between teacher efficacy and

instructional guidance.

Ho4: There is no significant relationship between teacher efficacy and principal support.

Statistical analysis of the data included descriptive statistics by establishing summated mean scores with standard deviations in each of the items in the five constructs: teacher efficacy, mentoring, teacher support, instructional guidance, and principal support. The overall summated mean score was also established for each construct. Linear regression correlation with independent one-tail test was used to test the null hypotheses and the level of significance was set at .01. The statistical procedures were all performed using the SPSS compute program.

This chapter contained four sections. The first section presented a set of descriptions of the participants and their mentors. The second section presented descriptive statistics of each of the five constructs: efficacy, teacher support, instructional guidance, principal support, and teacher support. The third section presented the findings of the regression analysis and analysis of the variance. Each hypothesis was tested and correlation established. The fourth section presented the findings from correlation analysis that identified the items in construct II (mentor support), construct III (principal support), construct IV (teacher support), construct V (instructional guidance) that were significantly related to construct I (teacher efficacy).

Description of the Population

The questionnaire was distributed to one hundred and forty-four teachers who completed their first year of service at IPS. The first mailing of questionnaires was done in mid-August and resulted in sixty-seven returned questionnaires. The second attempt was done by faxing the questionnaire to the individual schools with a gentle reminder at the end of August 2002. The second attempt resulted in twenty-eight returned questionnaires. The total number of questionnaires returned was ninety-five, resulting in a 66% return rate.

Sixty teachers out of the ninety-six taught in elementary schools (Grades K-5), and thirty-five of them taught in secondary schools (Grades 6-12).

Fifteen teachers were males and eighty were females. Seventy-nine of them were whites, ten blacks, three hispanics, two asian/pacific islanders, and one registered mixed race.

Sixty-eight of them were under thirty years of age. Fifteen of them were between the ages of thirty-one and forty. Ten of them were between the ages of forty-one and fifty. Only two indicated the ages between fifty-one and sixty.

The majority of the mentor teachers were between the ages of thirty-one and fifty. The teaching experiences of the mentor teachers ranged from six years to over twenty years.

Twenty-nine of the first-year teachers attended Indiana University. Twenty-three attended Ball State University, five attended Indiana State University, four attended Purdue University, two attended Anderson University, and thirty-two of them attended colleges labeled as other.

Descriptive Data of the Five Constructs

Construct I – Efficacy

Efficacy refers to the sense of control that teachers believe that they have over their teaching environment. Teachers with high sense of efficacy believe that they directly influence student achievement. Feelings about their ability to manage, motivate, plan, execute, and individualize instruction are also indicative of teacher efficacy (Durham, 2000).

In this study, first-year teachers were asked to assess their efficacy by indicating their confidence level on the selected sixteen teaching behaviors identified by Kilgore and Kozisek (1989) as the areas where first-year teachers experienced difficulty.

The summated mean score with standard deviation was computed for each of the behaviors that represented teachers' confidence level. Teachers reported that they had "no confidence" (1 on a Likert scale) to "high confidence" (4 on a Likert scale). The average level of confidence reported on each item ranged from 3.38 (on a 4 point Likert scale) to 2.77 (Table 1). The three areas first-year teachers rated the highest in confidence level were "relating to students," "knowledge of subject areas," and "communication with administrators, colleagues, students and parents." First-year teachers indicated their lowest confidence level in "readiness for the first day of school," "individualize instruction for students," and "maintaining student behavior in my classroom." Standard deviations ranged from .70 to .50. The overall level of confidence on all sixteen behaviors was reported at 3.10 (Table 1).

Table 1

Construct 1: Teacher Efficacy

Statements of Confidence * (N=95)

	<u>X</u>	<u>SD</u>
Relating to Students	3.38	.53
Knowledge of Subject Matter	3.37	.62
Communication with Adm./Colleagues	3.28	.66
Ability to Complete Paperwork	3.24	.61
Planning Lessons	3.22	.59
Organize Time	3.21	.70
Relating to Adm./Colleagues	3.20	.67
Teaching Methods and Techniques	3.10	.58
Managing Classroom Efficiently	3.08	.61
Evaluating and Assessing Students	3.04	.68
Motivating Students	2.99	.53
Relating to Parents	2.98	.68
Using Curriculum Materials	2.96	.60
Managing Student Behavior	2.93	.61
Individualizing Instruction	2.85	.68
Readiness for First Day of School	2.77	.50
Average of all 16 items	3.10	.37
*Preface each statement with: "Reflecting on 2001-2002 school year, the degree to which I feel confident in: _____"		
1 – no confidence	2 – low level of confidence	3-confident
4 - high level		

Construct II – Mentoring

Mentoring refers to the pairing of an experienced teacher with a beginning teacher (Durham, 2000). The mentor's role is to work with the beginning teachers, providing supportive interventions and actions that help a teacher adjust to the teaching profession.

In this study, teachers were asked to rate the frequency with which they were given mentoring support by responding to fifteen questions. The behaviors in this construct represented areas from the literature where teachers reported that they wanted mentoring support (Kilgore & Kozisek, 1989). Teachers reported that they engaged with the mentor "often" (3) to "never" (1) on a Lykert scale.

The summated mean score with standard deviation was computed for each item in this construct. The average level of mentoring support for each item established by the summated mean scores ranged from 2.81 (on a three point Likert scale) to 2.1 (Table 2). Teachers reported their mentor teachers provided the highest level of support in the following areas: "my mentor encouraged me to attend in-service session," "my mentor gave me feedback about my teaching," and "my mentor gave me suggestions on evaluation and assessment of students." Teachers reported that mentor teachers provided the lowest level of support in "my mentor provided time for me to talk to other beginning teachers." The second lowest area identified by the teachers was "my mentor demonstrated lessons for me." The standard deviations ranged from .73 to .28. The overall measure of support reported was 2.57 (Table 2).

Table 2

Construct II – Mentor Support

Areas of Mentor Support * (N=95)

	<u>X</u>	<u>SD</u>
Encouraged to Attend In-Service	2.81	.28
Given Feedback About Teaching	2.73	.29
Given Suggestions on Assessment	2.69	.34
Observed My Teaching	2.68	.30
Assisted with Teaching Methods	2.68	.34
Helped with Adm. Paperwork	2.62	.45
Assisted with Management of Class	2.62	.38
Encouraged to Observe Him/Her Teach	2.58	.46
Provided In-Class Assistance	2.56	.53
Invited to Social Gathering	2.53	.53
Discusses School Policies	2.51	.42
Assisted with Professional Development Plan	2.51	.49
Discussed District Policies	2.48	.51
Demonstrated Lessons	2.46	.51
Provided Time to Talk to Other New Teachers	2.17	.73
Average of all 15 items	2.57	.57
*Respond according to the following scale:		
1 – Never	2 – Sometimes	3 – Often

Construct III – Principal Support

Principal support referred to the actions principals provided to help the new teachers in their first year of adjustment and growth. The support included areas such as invitation to school social gatherings, explanation of district and school policies, feedback on observation, assistance in the management of class, assistance with professional development plan, suggestions on student assessment, and demonstrations of lessons.

Teachers were asked to rate the frequency with which they were given principal support by responding to fifteen questions. The items represented areas from the literature where teachers reported that they wanted principal support (Kilgore & Kozisek, 1989). Teachers reported that they engaged with the principals “often” (3) to “never” (1).

The summated mean score with standard deviation was computed for each item in this construct. The average level of principal support on each item ranged from 2.4 (out of a 3 point scale) to 1.2 (Table 3). The three items teachers identified that they received high level of support from principals were “ my principal invited me to school gathering,” “ my principal talked with me about district policy and philosophy,” and “my principal gave me feedback about my teaching.” The two items teachers identified that they received the lowest level of support from principals were “ my principal encouraged me to observe him/her teach” and “my principal demonstrated lessons for me.” Standard deviations ranged from .73 to .40. The overall measure of support reported in this construct was 1.91 (Table 3).

Table 3

Construct III – Principal Support

Areas of Principal Support * (N=95)

	<u>X</u>	<u>SD</u>
Invited to Social Gathering	2.40	.58
Encouraged to Attend In-Service	2.27	.58
Given Feedback About Teaching	2.18	.49
Observed My Teaching	2.15	.47
Discussed District Policies	2.05	.56
Discussed School Policies	2.02	.54
Assisted with Management of Class	1.98	.57
Given Suggestions on Assessment	1.94	.62
Provided In-Class Assistance	1.85	.64
Provided Time to Talk to New Teachers	1.83	.73
Assisted with Teaching Methods	1.82	.57
Assisted with Professional Development Plan	1.75	.65
Helped with Adm. Paperwork	1.74	.51
Demonstrated Lessons	1.41	.46
Encouraged to Observe Him/Her Teach	1.28	.40
Average of all 15 items	1.91	.51
*Respond according to the following scale:		
1 – Never	2 – Sometimes	3 – Often

Construct IV – Teacher Support

Teacher Support referred to the sources from which the encouragement of teaching came. Parents, other teachers, administrators, mentor, having sufficient materials, an environment that is conducive to professional growth, feeling of accomplishment, job satisfaction, and work load were all identified as sources of teacher support (Kilgore & Kozisek, 1989).

Teachers responded to nine questions about from whom and from where they received support during their first year of teaching. Teachers could choose from a four point scale indicating level of support from “much support” (4) to “no support” (1).

The summated mean with standard deviation was computed for each of the items in this construct. The average level of support identified by the summated mean scores on each item ranged from 3.5 (out of a 4 point scale) to 2.0 (Table 4). Overall teachers indicated that they received the highest level of support from their mentors (3.5), the second highest from other teachers (3.1), and the third highest from their own level of job satisfaction (3.1).

First-year teachers also indicated that they received the lowest level of support from “parents” and the second lowest was “my work load.” Standard deviations ranged from .81 to .35. The overall measure of support in this construct was 2.88 (Table 4).

Table 4

Construct IV – Teacher Support

Areas of Teacher Support* (N=95)	<u>X</u>	<u>SD</u>
Mentor	3.50	.50
Other Teachers	3.12	.56
Job Satisfaction	3.09	.45
Feeling of Accomplishment	3.06	.54
Administrators	2.87	.81
Conducive Environment	2.86	.61
Sufficient Materials/Resources	2.71	.74
Work Load	2.65	.61
Parents	2.03	.35
Average of all 9 items	2.88	.48

* Preface each statement with: “Reflecting on the 2001-2002 school year, I felt most supported and encouraged by: _____”

1- No Support 2 – Some Support 3 – High Level of Support
4- Much Support

Construct V – Instructional Guidance

Teachers responded to six questions concerning from whom they received instructional guidance. The questions in this section asked the first -year teachers how often and from whom they received instructional guidance and advice.

Responses were based on a four-point scale ranging from “much support” (4) to “no support”(1). The sources of instructional guidance included the appointed mentor, other teachers, grade/department chairs, administrators, college experiences, and in-service training.

The summated mean score with standard deviation was computed for each of the item in this construct. The average level of instructional guidance established by the summated mean scores ranged on each item from 3.29 (out of a 4 point scale) to 2.56 (Table 5). First-year teachers reported that they received the highest level of instructional guidance and advice from their mentors (3.29) and other teachers (3.20). The lowest level of instructional guidance and advice was from in-service training (2.56). Standard deviations ranged from 1.17 to .63. Instructional guidance from grade chair or department chair had a standard deviation of 1.17 indicating that the range of responses from first-year teachers vary widely. The overall measure of support in construct 5 was 2.83 (Table 5).

Table 5

Construct 5 – Instructional Guidance

Instructional Guidance and Support* (N=95)

	<u>X</u>	<u>SD</u>
Appointed Mentor	3.29	.82
Other Teachers	3.20	.67
Grade or Department Chairs	2.73	1.17
Administrators	2.64	.84

(table continues)

College Course/Experiences	2.56	.63
In-Service Training	2.56	.76
Average of all 6 items	2.83	.53
* Preface each statement with: "Reflecting on 2001-2002 school year, instructional guidance and advice I received came from: _____"		
1 – No Support	2 – Some Support	3 – High Level of Support
4 – Much Support		

Comparing across all five constructs, the lowest mean scores were found in construct III (principal support). Some first-teachers reported that principals never encouraged them to observe principals teach and never demonstrated lessons.

Hypotheses Testing

These following null hypotheses were tested in this study:

Ho1: There is no significant relationship between teacher efficacy and mentoring.

Ho2: There is no significant relationship between teacher efficacy and teacher support.

Ho3: There is no significant relationship between teacher efficacy and instructional guidance.

Ho4: There is no significant relationship between teacher efficacy and principal support.

The first hypothesis was, "there is no significant relationship between teacher efficacy and mentoring." Linear regression correlation with independent one-tail test

was used to determine the relationship between teacher efficacy and mentoring. The significance level was set at .01. The results of the test were displayed in

Table 6.

Table 6

Results of Testing Ho1: Relationship between efficacy and mentoring

Linear Regression					
	R	R Square	Adjusted . Square	Std. Error of the Estimate	Sig
Efficacy as the outcome Mentoring as the predictor	.179	.032	.022	.3683	.041

** Correlation is significant at the 0.01 level (1-tailed).

The hypothesis stating there is no significant relationship between teacher efficacy and mentoring was retained (Table 6). The sample value did not fall in the critical region. A correlation of the data revealed that teacher efficacy and mentoring were not significantly related, $r = +.179$, $n = 95$, $p = .041$, one tail. The magnitude of the sample correlation (r) did not equal or exceed the critical value. This hypothesis was analyzed through the application of correlational statistics by regression analysis. There was no attempt to measure differences between males and females, or between elementary and secondary teachers.

SPSS regression analysis was applied to the summated mean score for mentoring and the summated mean score for efficacy for the sample population. The

coefficient of determination (R Square) for teacher efficacy as the outcome variable and mentoring as the predictor variable was .032 (adjusted R Square = .022).

The second hypothesis was, “there is no significant relationship between teacher efficacy and any level of teacher support.” Linear regression correlation with independent one-tail test was used to determine the relationship between the outcome variable, teacher efficacy, and the predictor variable, teacher support. The significance level was set at .01. The results of the test are displayed in Table 7.

Table 7

Results of Testing Ho2: Relationship between teacher efficacy and teacher support

	Linear Regression				
	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig
Efficacy as The outcome Teacher Support As the predictor	.568**	.323	.316	.3080	.000

** Correlation is significant at the 0.01 level (1-tailed).

As shown in Table 7, the correlation was significant between efficacy and teacher support. Therefore, null hypothesis two was rejected. A significant relationship was found between teacher efficacy and teacher support. A correlation for the data revealed that teacher efficacy and teacher support were significantly related, $r = +.568$, $n = 95$, $p = .000$, one tail. The magnitude of the sample correlation (r) did exceed

the critical value. This hypothesis was analyzed through the application of correlational statistics by regression analysis. There was no attempt to measure differences between males and females, or between elementary and secondary teachers.

SPSS regression analysis was applied to the summated mean score for teacher efficacy and teacher support for the entire population. The coefficient of determination (R Square) for teacher efficacy as the dependent variable and teacher support as the independent variable was .323 (adjusted R square = .3160).

The third hypothesis was, “there is no significant relationship between teacher efficacy and instructional guidance.” Linear regression correlation with independent one-tail test was used to determine the relationship between teacher efficacy and instructional guidance. The significance level was set at .01. The results of the test are displayed in Table 8.

Table 8

Results of Testing Ho3: Relationship between teacher efficacy and instructional guidance

	Linear Regression				
	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig
Efficacy as the outcome Instructional Guidance as the predictor	.460**	.212	.204	.3323	.000

** Correlation is significant at the 0.01 level (1-tailed).

As shown in Table 8, the correlation was significant between efficacy and instructional guidance, therefore, null hypothesis three was rejected. A significant relationship was found between teacher efficacy and instructional guidance. The sample value did fall in the critical region. A correlation for the data revealed that teacher efficacy and instructional guidance were significantly related, $r = +.460$, $n = 95$, $p = .000$, one tail. The magnitude of the sample correlation (r) did exceed the critical value. This hypothesis was analyzed through the application of correlation statistics by regression analysis. There was no attempt to measure differences between males and females, or between elementary and secondary teachers.

SPSS regression analysis was applied to the summated mean score of teacher efficacy and instructional guidance for the sample population. The coefficient of determination (R Square) for teacher efficacy as the outcome variable and instructional guidance as the predictor variable was .212 (adjusted R square = .204).

The fourth hypothesis was, “there is no significant relationship between teacher efficacy and principal support.” Linear regression correlation with independent one-tail test was used to determine the relationship between teacher efficacy and principal support. The significance level was set at .01. The results of the test are displayed in Table 9.

Table 9
Results of Testing Ho4: Relationship between teacher efficacy and principal support

Linear Regression

(table continues)

	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig
Efficacy as the outcome Principal Support as the predictor	.442**	.196	.187	.3357	.000

** Correlation is significant at the 0.01 level (1-tailed).

As shown in Table 9, the correlation was significant between teacher efficacy and principal support, therefore, null hypothesis four was rejected. A significant relationship was found between teacher efficacy and principal support. The sample value did fall in the critical region. A correlation of data revealed that efficacy and principal support were significantly related, $r = +.442$, $n = 95$, $p = .000$, one tail. The magnitude of the sample correlation (r) did exceed the critical value. This hypothesis was analyzed through application of correlational statistics by regression analysis. There was no attempt to measure differences between males and females, or between elementary and secondary teachers.

SPSS regression analysis was applied to the summated mean score for principal support and the summated mean score for efficacy for the sample population. The coefficient of determination (R Square) for teacher efficacy was the outcome variable and principal support as the predictor variable was .442 (adjusted R square = .187).

Item Correlation Analysis

Item analysis was conducted to further identify significant items impacting

teacher efficacy. Summated mean score of each individual items in construct II (mentor support), construct III (principal support), construct IV (teacher support), construct V (instructional guidance), and the overall summated mean score in construct I (teacher efficacy) were correlated by applying the Pearson correlation coefficient.

The results revealed the items in construct II (mentor support), construct III (principal support), construct IV(teacher support), and construct V (instructional guidance) that had a strong relationship with teacher efficacy were feeling of accomplishment($r = .620$), job satisfaction ($r = .551$), conducive environment ($r = .455$), sufficient materials ($r = .414$), instructional guidance from college pre-service experiences ($r = .401$), and guidance from administrators ($r = .355$) (Table 10).

Table 10

Item Correlation Analysis

	Pearson Correlation Coefficient	
	r.	sig. (1-tailed)
Efficacy and Feeling of Accomplishment	.620**	.000
Efficacy and Job Satisfaction	.551**	.000
Efficacy and Conducive Environment	.455**	.000
Efficacy and Sufficient Materials	.414**	.000

(table continues)

Efficacy and Instruction from College Experiences	.401**	.000
Efficacy and Guidance from Administrators	.355**	.000

** Correlation is significant at the 0.01 level (1-tailed).

Summary of Findings

This chapter provided a summary of the findings in this study. It was divided into four major sections. The first section presented a set of descriptions of the participants and their mentors. The second section presented descriptive statistics of each of the five constructs: efficacy, teacher support, instructional guidance, and principal support, and teacher support. The third section presented the findings of the regression analysis and analysis of the variance. Each hypothesis was tested and correlation established. The fourth section presented the findings from correlation analysis that identified the items in construct II (mentor support), construct III (principal support), construct IV (teacher support), construct V (instructional guidance) that were significantly related to construct I (teacher efficacy).

Summary of the Five Constructs

Five constructs were investigated in this study. The five included teacher efficacy, mentor support, principal support, teacher support, and instructional guidance.

1. In construct I (efficacy), first-year teachers indicated that their efficacy was

high in relating to students, knowledge of subject matters, communication with administrators and colleagues, and ability to complete paperwork. Their efficacy was the lowest in managing student behaviors, individualizing instruction, and readiness for the first day of school.

2. In construct II (mentoring), first-year teachers indicated that the mentors were helpful in encouraging them to attend in-service sessions, giving feedback about teaching, and giving suggestions on assessment. First-year teachers indicated that their mentors very seldom provided time for them to talk with other new teachers, demonstrated lessons, and discussed district policies.

3. In construct III (principal support), first-year teachers indicated that principals invited them to social gatherings often, encouraged them to attend in-service sessions often, and given feedback about teaching often. However, first-year teachers revealed that principals never or sometimes encouraged them to observe principals teach, principals never or sometimes demonstrated lessons, and principals never or sometimes helped with administrative paperwork.

4. In construct IV (teacher support), first-year teachers reported that they received support mostly from their mentors and other teachers. They received no or some support from parents, workload, and sufficient materials and resources.

5. In construct V (instructional guidance), first teachers reported that their instructional guidance came from the appointed mentor and other teachers. In-service training and college experiences provided some level of instructional guidance.

Summary of Hypotheses Testing

Four hypotheses were tested and the following is a summary of the results.

1. Null hypothesis one was retained. There was no significant relationship found between teacher efficacy and mentor support. Linear regression correlation with independent one-tail test was used to determine the relationship between teacher efficacy and mentor support. Significance level was set at 0.01 level. Null hypothesis one was retained with a significance level of .041.

2. Null hypothesis two was rejected. There was a significant relationship found between teacher efficacy and teacher support. Linear regression correlation with independent one-tail test was administered to determine the relationship between teacher efficacy and teacher support. Significance level was set at 0.01 level. This null hypothesis was rejected with a significance level of .000.

3. Null hypothesis three was rejected as well. There was a significant relationship found between teacher efficacy and instructional guidance. Linear regression correlation with independent one-tail test was used to determine the relationship between teacher efficacy and instructional guidance. Significance level was set at 0.01 level. This null hypothesis was rejected with a significance level of .000.

4. Null hypothesis four was rejected. There was a significant relationship found between teacher efficacy and principal support. Linear regression correlation with independent one-tailed test was used to determine the relationship between teacher efficacy and principal support. Significance level was set at 0.01 level. This null hypothesis was rejected with a significance level of .000.

Chapter 5

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

Summary of the Study

The purpose of this study was to assess the effect of supportive interventions on first-year teacher efficacy.

First-Year teachers in the Indianapolis Public schools during 2001-2002 school year were given a questionnaire to complete in August of 2002. The questionnaire asked them questions regarding their efficacy in various areas: policy, school climate, classroom management, and instruction. Teachers responded to questions concerning from whom they received instructional support and guidance. They also answered questions of frequency of supportive interventions given by the assigned mentors and principals.

Overall, the design involved the following basic procedures:

1. One hundred and forty-four first-year teachers in the Indianapolis Public Schools were invited to participate in the study through completing a questionnaire.
2. Five constructs were included in the study: teacher efficacy, teacher support, instructional guidance, principal support, and mentor support. A questionnaire containing all five constructs were distributed to the participating teachers.

The questionnaire was modeled after the instrument Alvah M. Kilgore and Julie

Kozesek designed when they conducted the study on the effect of a planned induction program on first-year teacher in 1989.

3. Data were collected through the administration of a questionnaire.

4. Data were collected through the administration of questionnaires. Statistical descriptive analysis was used to determine the summated mean scores of the individual items in all five constructs: efficacy, teacher support, instructional guidance, principal support, and mentor support. The overall summated mean score of each construct was obtained as well.

5. Linear regression correlation with independent one-tail test was used to test the null hypotheses by correlating the summated mean score of teacher efficacy to the summated mean scores of teacher support, instructional support, principal support, and mentor support. The level of significance was set at .01. All statistical procedures were performed by using the SPSS computer program.

6. Correlation analysis was done to identify items within construct II (teacher support), construct III (instructional guidance), construct IV (principal support), and construct V (mentor support) that were significantly related to construct I (teacher efficacy).

Statistical analysis of the data included descriptive statistics regarding the mean with standard deviation. Linear regression correlation with independent one-tailed test was used to test the null hypotheses with the significance level set at 0.01. Pearson product correlation was applied to reveal the relationships between items in constructs II, III, and IV and construct I (teacher efficacy). The statistical procedures were all performed using SPSS computer program.

Summary of Approach and Findings

The relationships between teacher efficacy and teacher support, guidance, principal support, and mentor support were studied. Teacher characteristics, such as age, gender, undergraduate institution, and grade level taught were asked. Mentors' age and number of teaching experiences were also collected.

A demographic analysis of the characteristics indicated that the teacher respondents indicated that over 63% (60, N = 95) of the teachers taught elementary grades. 84% of them were females. More than 72% (68, N =95) of the respondents were between 20 and 30 years of age. The small number of secondary teachers and males responding made statistical analysis of these groups questionable.

An analysis of the characteristics of the mentor teachers indicated the majority of them taught between six to twenty years. 43% of the mentor teachers were between the ages of 41 to 50.

Five constructs were measured in the questionnaire –teacher efficacy, teacher support, instructional guidance given, principal support, and mentor support.

Summary of Findings and Conclusions

The following null hypotheses were tested:

Ho1: There is no significant relationship between teacher efficacy and mentoring.

Ho2: There is no significant relationship between teacher efficacy and teacher support.

Ho3: There is no significant relationship between teacher efficacy and instructional guidance.

Ho4: There is no significant relationship between teacher efficacy and principal support.

Significant relationships were found between efficacy and teacher support, efficacy and instructional guidance, and efficacy and principal support. No significant relationship was found between efficacy and mentoring.

Two Rand studies, done in 1976 and 1977, on the concept of teacher efficacy determined that teacher efficacy was the most important determinant to change. This was confirmed by an investigation conducted by Ashton, Webb, & Doda (1983). In a later study conducted by Kilgore and Kozisek (1989) teacher reported that teacher efficacy, or a teacher's belief in his/her ability to teach, appeared to be an important ingredient in the makeup of a successful novice teacher. The present study explored whether there were significant relationships between teacher efficacy (outcome) and four predictor variables – teacher support, instructional guidance, principal support, and mentoring.

1. No significant relationship existed between efficacy and mentoring.

The results showed no significant relationship between the support interventions provided by the assigned mentor teachers and teacher efficacy. Results on previous research on mentoring were mixed. A study by Galvez-Hjornivek (1996) showed a difference in the perceived effect of the mentoring relationship when factors such as age and gender were considered. A late study by Wilkinson (1997) reported that mentoring had little effort on providing first-year teachers with the support that was needed. The present study revealed no significant correlation between teacher

efficacy and mentoring.

2. Significant relationships existed between efficacy and teacher support.

Teacher support was defined earlier in this study as the teaching climate in the building. In this study, the data revealed that the highest correlation calculated was from the relationship between efficacy and teacher support. The impact of the school environment (teacher support) on teacher efficacy confirmed the results of previous studies. According to Kilgore & Kozisek (1989), the influence of the school environment appeared to be a powerful socializing force on first-year teachers.

3. Significant relationship existed between instructional guidance and teacher efficacy. Instructional guidance is the feedback given to teachers on their performance. This research found that the relationship between instructional guidance and efficacy was significant. Respondents in this research indicated that the appointed mentor and other teachers provided significant support.

4. Significant relationship existed between principal support and teacher efficacy. Principal support dealt with the areas in which principals provided the most support. This research found that the relationship between principal support and efficacy was significant. However, about 50% of the respondents reported that principals never demonstrated lessons, helped with paperwork, assisted with professional development plan, or provided in-class assistance. In fact, principal support produced the lowest summated mean score in all five constructs.

Recommendations

This study found that significant relationships existed between efficacy and

teacher support, instructional guidance, and principal support. It also found that there was no significant relationship between mentoring and teacher efficacy.

Recommendations derived from the findings of this study include:

1. District officials need to have a full understanding of the specific supportive interventions that boost first-year teachers' efficacy. From this study, first-year teachers indicated through the questionnaire that feeling of accomplishment, job satisfaction, conducive environment, sufficient materials, exposure to pre-service program from college experience, and guidance from administrators helped build their efficacy. School districts must examine the effect of their supportive interventions and its impact on first-year teacher efficacy. The roles and responsibilities of district personnel must be clearly defined to align program purposes to address intentionally the specific interventions that boost first-year teacher efficacy. School districts, building administrators, and people in charge of professional development should focus on the six factors that seemed to have the highest impact on first-year teacher efficacy: feeling of accomplishment, job satisfaction, conducive environment, sufficient materials, exposure to pre-service experiences, and guidance from administrators.
2. In order for mentor support to be effective, we must examine the reasons why mentor support has not consistently impacted first-year teacher efficacy. One of the major reason identified was the training mentor teachers received. Teacher induction researchers have consistently suggested that mentor teachers need preparation and training (Bey & Holmes, 1990; Huling-Austin et al., 1989). Odell (1990) suggested that mentor teachers need training related to the purpose

of the induction programs, school district philosophy, needs and priorities, district policies and operating procedures, working with the adult learners, stages of teacher development, concerns and needs of beginning teachers, clinical supervision, classroom observation, conferencing skills, teacher reflection, and fostering self-esteem and self-reliance in the novice teachers.

The fact that mentor teachers have to carry a full teaching load themselves presented a significant challenge. Armed with the best intention and quality training, mentor teachers have to balance their time and effort between the responsibilities of their own classrooms as well as the responsibilities of being a mentor.

In order for us to assess the effectiveness of the mentor teacher support, we must focus on the following: program description and purposes, implementation tactics, selection procedures, roles of the mentor and novice teachers, training process, and the formation of an incentive program to encourage and reward mentor teachers.

District personnel and building administrators must model for everyone that support for the novice teachers is a priority. In order for mentor teacher support to positively impact first-year teachers, district and building administrators must monitor the implementation closely, make adjustment when necessary, and trouble shoot in a timely manner. Everyone in the school community needs to remember that the aim of mentoring is to induct and retain novice teachers, to reward and revitalize experienced teachers, and to increase professional efficacy (Huling-Austin, 1989).

3. A heightened sense of teacher efficacy through reflective practice is critical in the creation of a supportive professional environment for all teachers (Reynolds, 1992). District and school administrators should put forth their best

effort in developing an environment of plentiful resources and a focus on professional collegiality and growth in order to support all teachers. Ashton, Webb and Doda (1983) indicated that teachers revealed that feelings of efficacy was difficult to maintain in the current school setting.

This study revealed that first-year teachers indicated that they received high level of support from mentors, other teachers, and job satisfaction. This finding further confirmed the importance of a supportive environment and the need for everyone in the school community to assume responsibility for the success of the first-year teachers. The concept of job-embedded professional development has to mean that educators must see themselves as teachers of adults and view the development of others as one of their most important responsibilities.

4. Brock and Brady (1998) found that the principal's role in the induction of beginning teachers has been largely ignored. This present study revealed that principals consistently invited first-year teachers to social gatherings, and encouraged them to attend in-service. However, first-year teachers indicated that they did not receive much support from principals in the areas of observation of teaching, demonstration of lessons, assistance with professional development plan, and assistance with teaching methods. This finding may indicate that most principals have delegated the responsibilities of first-year teacher support to the mentor teachers. This finding also may indicate that school districts in general have not formalized the expectations for principals in the area of supporting new teachers.

In order for principal support to be meaningful to beginning teachers, we must examine the following:

- a. The need for the districts to formally define the principal's role in the support of first-year teachers.
 - b. The need for the principals to assume the role of a master teacher and commit time and effort to assist first-year teachers.
 - c. The need for principals to understand that support for first-year teachers cannot solely be on the shoulders of the mentor teachers.
 - d. The need for principals to understand that support for first-year teachers require the effort of the entire school community.
5. The need for principals to promote a professional environment by focusing on the growth of all the adults in the schools in order to support beginning teachers. The benefits of a professional environment can positively impact overall school culture (Walling, 1994).
6. The need for principals to understand that a collegial team consisting of veteran teachers and principals provide a powerful support network for beginning teachers.
7. The need for principals to adjust and monitor first-year teachers' assignments to ensure that first-year teachers are not dealing with large classes and students with severe behavior, attendance, and academic difficulties during the first year.

Recommendations for Further Research

Further research of teacher efficacy should be conducted within the contexts of mentor teacher training, teacher education, school organization structure, and

beginning teacher socialization.

Further research on mentor teacher training needs to focus on the components that relate to the purposes of the induction programs, district and school philosophy and policies, working with adult learners, stages of teacher development, concerns and needs of beginning teachers, clinical supervision, classroom observation, conferencing skills, teacher reflection, and fostering self-esteem and self-reliance in the novice teacher.

To combat the threats to inefficacy, especially the sense of uncertainty endemic to teaching, further research is needed in the area of developing the analytical and evaluative skills of teachers in teacher education. A major influence on teachers' sense of efficacy is the uncertainty most teachers feel about whether or not they are having an effect on student learning (Ashton, 1984). New approaches in teacher education are needed in the area of developing teachers' analytical and problem solving skills so that new teachers are more able to cope with the uncertainty elements of the teaching profession

Major contributors to teachers' sense of inefficacy are organizational and structural (Ashton, 1984). Teacher efficacy must be developed within the context of school organization and structure. Further research is needed in the areas of providing collegial support for beginning teachers to boost first-year teachers' efficacy. Creating collegial relations among new and experienced teachers and teacher socialization warrant further investigation.

Ashton's (1984) identification of the five conditions that contributed to teachers' sense of inefficacy and the loss of professional self-worth can serve as a guide in the effort to boost first-year teacher efficacy. The five conditions included the lack of economic rewards, role overload, a pervasive sense of uncertainty, isolation, and a sense of powerlessness. Further research is needed in these five areas to improve the conditions of teaching in order to sustain and maintain the profession through the enhancement of teacher efficacy.

Since this investigation revealed that first-year teachers rated principal support as the lowest among all five constructs, further research is definitely needed to assess the effort of principals and all adults in the school community and its effect on first-year teacher efficacy.

Since preparing teacher is a developmental process, it will be beneficial to determine the effect of the partnership between schools and colleges and its effect on teacher efficacy. A longitudinal study that follows beginning teachers from their college days to their first three years of the teaching career based on the elements of teacher efficacy can be very beneficial for both school districts and colleges.

With the understanding that time, energy, and thought are rarely provided for school personnel to carefully consider the impact of the current practices in the induction of first-year teachers, the researcher recommends that further research is needed in exploring creative ways to provide time in an already hopelessly busy schedule. The consequences of not having time and energy to engage in thoughtful reflection may be the loss of many potentially competent first-year teachers.

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APPENDIXES

APPENDIX A
CORRESPONDENCE

From: Jennifer McCreadie
To: Eswillia@befac.indstate.edu
Date: Wed, Jul 24, 2002 10:41 AM
Subject: Li-Yen Johnson's Research Application

Dr. Williams:

Li-Yen Johnson's application to do research in the Indianapolis Public Schools, entitled, "The Effect of Supportive Interventions on First Year Teacher Efficacy," has been tentatively approved, pending receipt of a positive review by the Institutional Review Board of the School of Education at Indiana State University.

As far as we are concerned, our review can proceed simultaneously with the university's, but an applicant cannot begin her/his research without the university IRB's approval.

If you need a more formal letter, please let me know.

Jennifer McCreadie
Research, Evaluation and Assessment
Indianapolis Public Schools
317/226-4728 (voice)
317/226-4726 (fax)
mccreadj@mail.ips.k12.in.us

CC: LiYen Johnson

February 26, 2002

Dr. Julie A. Kozisek
Doane College
1014 Boswell
Crete, Nebraska 68333

Dear Dr. Kozisek:

I am a doctoral student with Indiana State University. My area of research will concentrate on the effect of the supportive framework on first-year teacher efficacy.

Dr. Carol Durham from Kansas City, Missouri School District gave me verbal permission to replicate her study on the effect of supportive interventions on first-year teacher efficacy. She informed me that I needed to obtain permission from you to use the survey she used in her dissertation that was developed by you.

The teacher survey you developed will be used as a basis of my doctoral project for Indiana State University. I have included the abstract for my project as well as a copy of the survey instrument that I plan to distribute.

I hope that you would allow me to use the teacher survey for my research. I am excited about the possibilities and potential benefits my research will bring to the beginning teachers.

Thanks very much for your consideration. Please feel free to call if you have concerns or questions.

Respectfully,

Li-Yen Johnson
Regional Director of Tech Region
Indianapolis Public Schools
1500 East Michigan St.,
Indianapolis, Indiana 46201
317-226-3127 (work)
317-594-0029 (home)

March 4, 2002

To: Li-Yen K. Johnson
From: Carol Durham
Re: Permission to replicate study
Date: March 4, 2002

You have my permission to replicate my study, *The effect of supportive interventions on first year teacher efficacy in the Kansas City Missouri School District*, which was modeled after a study conducted by Dr. Julie A. Kozisek, Doane College.

Good luck with your research. I am interested in knowing the results of your study.
Keep in touch.

Sincerely,



Dr. Carol Durham
Principal
Foreign Language Academy
3450 Warwick
Kansas City, Missouri 64111



Julie Kozisek, Ph.D.
Director of Elementary Education

I am so sorry I have been so tardy
in this response. The letter was buried on my
desk.

You have my permission to use the survey.
Please let me know if you have any other questions
or concerns.

Julie Kozisek

August 2002

A gentle reminder

Dear first-year teacher:

How are you! I hope you had a restful summer and are ready to start your second year of teaching.

This note is just a friendly reminder about the questionnaire you received around August 15, 2002. The questionnaire is a 5-page document and is designed to assess the effect of supportive interventions on first-year teacher efficacy.

Your participation is totally confidential and voluntary. I am faxing a second copy of the questionnaire along with this note just in case you did not receive it. If you have sent in your completed questionnaire, please disregard this note.

Thanks so much for your help.

Sincerely,

Li-Yen K. Johnson

October 3, 2002

Li-Yen Johnson
10307 Lakeland Drive
Fishers, Indiana 46038

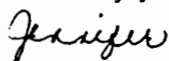
Dear Li-Yen:

This letter confirms that your proposal to conduct research with Indianapolis Public Schools teachers, "The Effect of Supportive Interventions on First-Year Teacher Efficacy," has been reviewed and approved by members of the Indianapolis Public Schools administrative staff.

We ask that you send a copy of any written report of your research to the Research, Evaluation and Assessment Department. Please let me know if I can be of any assistance with your research.

Best wishes with your project.

Sincerely yours,



Jennifer McCreadie
Supervisor

Cc: Carole Craig, Chief, Human Resources
Douglass Ann Kinkade, Ed.D., Director, Professional Development

APPENDIX B
QUESTIONNAIRE

QUESTIONNAIRE

Please share your feelings about what you experienced as a first year teacher. This questionnaire contains four parts. In Part I, you are asked to indicate your level of confidence in each of the areas listed below. Please read each statement and select by circling one of the numbers on the scales which best describes your answer.

Part I

Reflecting on the 2001-2002 school year, the degree to which I feel confidence in:

Response Scale - 1-No confidence 2-Low level of confidence 3-Confident 4-High

- | | |
|---------|--|
| 1 2 3 4 | 1. Maintaining student behavior in my classroom. |
| 1 2 3 4 | 2. Managing my classroom efficiently (organizing, keeping up with paperwork and lesson planning, etc.) |
| 1 2 3 4 | 3. Motivating students. |
| 1 2 3 4 | 4. Individualizing instruction for students of all levels. |
| 1 2 3 4 | 5. Evaluating and assessing students. |
| 1 2 3 4 | 6. Teaching techniques and methodologies. |
| 1 2 3 4 | 7. Knowledge of subject matter specific to my area. |
| 1 2 3 4 | 8. Ability to complete paperwork, records, reports. |
| 1 2 3 4 | 9. Organizing my time. |
| 1 2 3 4 | 10. Readiness for the first day of school. |
| 1 2 3 4 | 11. Planning and organizing lessons. |
| 1 2 3 4 | 12. Using curriculum guides, texts, materials, and resources. |
| 1 2 3 4 | 13. Communicating with administrators, colleagues, students, and parents. |
| 1 2 3 4 | 14. Relating to administrators and colleagues. |
| 1 2 3 4 | 15. Relating to students. |
| 1 2 3 4 | 16. Relating to parents. |

Part II A

Reflecting on the 2001-2002 school year, I felt most supported and encouraged by:

Circle the response that most accurately reflects what you experienced.

Response Scale

1-no support

2-some support

3-high level of support

4-much support

1 2 3 4

1. Parents

1 2 3 4

2. Other teachers

1 2 3 4

3. Administrators

1 2 3 4

4. My mentor.

1 2 3 4

5. Having sufficient materials/resources for my teaching areas.

1 2 3 4

6. An environment that is conducive to professional growth and development.

1 2 3 4

7. Feeling of accomplishment.

1 2 3 4

8. My level of job satisfaction.

1 2 3 4

9. My work load (time, energy needed, number of students, classes, etc.).

Part II B

Reflecting on the 2001-2002 school year, instructional guidance and advice I received came from:

1 2 3 4

1. Other teachers.

1 2 3 4

2. Administrators.

1 2 3 4

3. Grade or department chairs.

1 2 3 4

4. In-service training.

1 2 3 4

5. College coursework/experience

1 2 3 4

6. My appointed mentor.

Part III

Please respond according to the following scale:

1-Never

2- Sometimes

3-Often

- | | | | |
|---|---|---|---|
| 1 | 2 | 3 | 1. My principal talked with me about important district policies and philosophy. |
| 1 | 2 | 3 | 2. My principal discussed school policies and philosophy with me. |
| 1 | 2 | 3 | 3. My principal encouraged me to take part in a district wide staff development opportunities for beginning teachers. |
| 1 | 2 | 3 | 4. My principal allowed me to observe him/her teach. |
| 1 | 2 | 3 | 5. My principal invited me to school gatherings. |
| 1 | 2 | 3 | 6. My principal provided in-class assistance. |
| 1 | 2 | 3 | 7. My principal observed my teaching. |
| 1 | 2 | 3 | 8. My principal gave me suggestions on evaluation and assessment of students. |
| 1 | 2 | 3 | 9. My principal helped me with administrative paperwork. |
| 1 | 2 | 3 | 10. My principal gave me feedback about my teaching. |
| 1 | 2 | 3 | 11. My principal demonstrated lessons for me. |
| 1 | 2 | 3 | 12. My principal assisted me with my professional development plan. |
| 1 | 2 | 3 | 13. My principal provided time for me to talk to other beginning teachers. |
| 1 | 2 | 3 | 14. My principal assisted me with teaching strategies/practices. |
| 1 | 2 | 3 | 15. My principal assisted me with classroom management. |

Part IV

Please respond according to the following scale:

1-Never

2-Sometimes

3-Often

- | | | | |
|---|---|---|--|
| 1 | 2 | 3 | 1. My mentor talked with me about important district policies and philosophy. |
| 1 | 2 | 3 | 2. My mentor discussed school policies and philosophy with me. |
| 1 | 2 | 3 | 3. My mentor encouraged me to take part in district wide staff development opportunities for beginning teachers. |
| 1 | 2 | 3 | 4. My mentor encouraged me to observe him/her teach. |
| 1 | 2 | 3 | 5. My mentor invited me to school gatherings. |
| 1 | 2 | 3 | 6. My mentor provided in-class assistance. |
| 1 | 2 | 3 | 7. My mentor observed my teaching. |
| 1 | 2 | 3 | 8. My mentor gave me suggestions on evaluation and assessment of students. |
| 1 | 2 | 3 | 9. My mentor helped me with administrative paperwork. |
| 1 | 2 | 3 | 10. My mentor gave me feedback about my teaching. |
| 1 | 2 | 3 | 11. My mentor demonstrated lessons for me. |
| 1 | 2 | 3 | 12. My mentor assisted me with my professional development plan. |
| 1 | 2 | 3 | 13. My mentor provided time for me to talk to other beginning teachers. |
| 1 | 2 | 3 | 14. My mentor assisted me with teaching strategies/practices. |
| 1 | 2 | 3 | 15. My mentor assisted me with classroom management. |