1999

Learner Centeredness as a Predictor of Teachers' Role Stress and Career Commitment

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Suggested Citation

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LEARNER CENTEREDNESS AS A PREDICTOR OF
TEACHERS' ROLE STRESS AND CAREER COMMITMENT

By

Kathryn Marie Krudwig

A dissertation submitted to the doctoral program faculty in Educational Leadership in partial fulfillment of the requirements for the degree of

Doctor of Education

In

Educational Leadership

UNIVERSITY OF NORTH FLORIDA
COLLEGE OF EDUCATION AND HUMAN SERVICES
August, 1999

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ACKNOWLEDGEMENTS

I truly value every phase of my doctoral program: the coursework, the comprehensive examination process, and the dissertation. I owe thanks to several people for this most positive experience.

I am indebted to Dr. Katherine Kasten, Dean of the College of Education and Human Services, and the doctoral faculty for their ongoing, active support. My dissertation committee, however, deserves my special thanks. Dr. Robert Drummond, my chairperson, extended his expertise, his time, and his positive energy without reservation. Dr. Joyce Jones shared her extensive knowledge of educational issues and helped me examine my research questions critically. Dr. Yiping Wan was particularly helpful in challenging my thinking as I worked to refine the theoretical model for my study. His leave for a new position in New Jersey was my loss. Dr. Charles Galloway shared his rich background of experience and knowledge, supporting my continuous efforts to clearly express my ideas. Dr. David Fenner supported my efforts to think logically and clearly about the issues raised by my study. All of my committee members gave freely of their time and guided me in ways that kept my motivation strong.

I am enormously indebted to my study buddies, Bob Frohlich and Don Leech. We worked together regularly throughout the doctoral program, and intensively for the semester leading up to the comprehensive exams. Both Don and Bob helped me stretch my ability to talk about educational issues from more than one perspective.

Lastly, I must acknowledge the immeasurable contribution my husband, George, made to my efforts. It was George who bought and installed software, repaired unexpected hard-drive crashes, and periodically kept me sane in the face of technological overload.
This Doctoral Dissertation is Dedicated

to

my husband George, my son John,

and my parents, Roland and Myrtle Kick.

Dad, I know you are looking down from heaven with a smile.

You taught me through your example to always think

about the big picture and to be persistent and hard-working.

Mom, you are my role model for your gentle,

intelligent, positive, and generous approach to life.

John, you have inspired me to take risks and enjoy new opportunities

with your continuous encouragement to “Go for it, Mom!”

George, you expressed your confidence in my abilities

every step of the way,

and gave freely of your time and energy to support my goals.

To each of you I offer my thanks

for your whole-hearted support of my journey.
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ABSTRACT

Learner Centeredness as a Predictor of Teachers' Role Stress and Career Commitment

by

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Questions explored in this study were: (a) Is learner centeredness related to teacher role stress and/or career commitment; (b) If so, can learner centeredness explain variance in teachers' role stress and/or career commitment; (c) Is the discrepancy between teacher and student perceptions of teacher practices related to teacher role stress and/or career commitment; and (d) If so, can this discrepancy explain variance in teachers' role stress and/or career commitment? The current need to provide every child with qualified and committed teachers in the face of a growing national teacher shortage supported the significance of the research.

The study was based on open systems theory (Thompson, 1996). An open system consists of inputs, process, and outputs, as well as feedback loops connecting these three components. All systems adjust to changes in their search for equilibrium (Katz & Kahn, 1966; Thompson, 1996). The
changes inherent in the shift toward learner centeredness can be expected to disrupt role expectations and lead to role stress for teachers (Connor, 1992; Fullan, 1991). A related construct, career commitment, is critical to sustaining teachers through the stresses of change (Firestone & Pennell, 1993).

Middle school teachers (N = 318) in three northeast Florida counties completed four surveys that measured their learner centeredness, role stress, career commitment, and demographic background. In addition, 60% of the sample (N = 192) had one class complete a survey about teacher practices. A total of 4,539 students completed this survey.

Findings from Pearson product-moment correlations suggested that teachers who were more learner centered in their beliefs and practices experienced less role stress (role insufficiency, role ambiguity, and role boundary) and higher levels of career commitment (career identity, career resilience, and career planning) than teachers who were less learner centered. With strengths of relationships ranging from low to moderate, it appears that learner centeredness offers measurable benefits to teachers.

In addition, findings from stepwise multiple regression suggested that learner-centeredness was a predictor of role stress and career commitment in teachers. The variance that was explained by learner-centered beliefs and practices ranged from 19% to 25% for role stress (role insufficiency, role ambiguity, and role boundary) and career commitment (career identity, career resilience, and career planning). Thus, teachers may be able to influence some of their own role stress and commitment to the profession through their beliefs and practices.

Using Pearson product-moment correlations, a low relationship was found between the discrepancy between teacher and student perceptions of
teacher practices and two dimensions of role stress, role ambiguity and role boundary. In addition, discrepancy was related to career commitment: The relationship to career identity was negative but low, while the relationship to career planning was negative but moderate.

Finally, results of multiple regression indicated slight predictive value of discrepancy for role stress and career commitment. The variance that was explained by discrepancy ranged from 3% to 11% for role stress (role boundary and role ambiguity) and career commitment (career identity and career planning). An open systems model was developed to show the influence of learner-centered beliefs, practices, and discrepancy on teachers' role stress and career commitment.

Tentative suggestions for practice, as well as recommendations for further study, concluded the dissertation. Focus was placed on the need for continued research of the complex issues that impact teachers' resilience.
CHAPTER ONE
INTRODUCTION TO THE STUDY

The Research Problem

Those who would lead reforms into the next century have not yet solved a major problem within the profession: Expert teachers, the backbone of our nation's educational reform movement, are stressed out and in short supply. The problem is multilayered, with novice teachers struggling to develop expertise while battling exhaustion from increasingly more complex role expectations. Yvonne Gold (1996), in her discussion of the status of beginning teachers, drew attention to the crisis through her observation based on the 1990 Carnegie Report: "nearly 40 percent of the teachers reported that if they had it to do over, they would not become a public school teacher" (p. 550).

Increased demands on teachers in their role as change agents are driven by complex global changes as the twenty-first century rapidly approaches. Knowledge acquisition and communication are developing at an exponential rate. The world's population continues to expand, accompanied by increasing global competition and interdependence. Resources are becoming scarcer, while the ecological balance of the earth is becoming more fragile. Finally, religious/political ideologies are diversifying worldwide, contributing to rapid changes of power (Conner, 1992, p. 39). All of these developments are felt in the classroom through increases in the diversity of the student population, the quantity and nature of what needs to be taught,
and the relationships teachers must maintain in order to access the resources they need to teach well.

Furthermore, the burgeoning employment opportunities available as an outcome of today's information-based, global economy offer a strong challenge to teachers' commitment to stay in a profession that cannot compete with the financial and workplace rewards of other careers. These challenges are nested in the societal context of a shrinking baby-boomer generation of teachers through retirement.

Placing teachers at the core of educational reform brings the role of teacher to center stage. More than a decade ago, The Holmes Group (1986) stressed the importance of teachers to the reform movement by criticizing those who would attempt to improve education to the exclusion of teachers: "Would-be reformers have attempted to impose solutions, assuming that their ideas could be readily accepted and implemented without the active involvement of practitioners. We can no longer perpetuate such major oversights" (p. 26). More recently, the National Commission on Teaching and America's Future (1996) supported the importance of teachers to educational reform in its assessment of school improvement initiatives:

Schools must reorganize themselves to enable more intensive kinds of learning, supported by close, personal relationships as well as new technologies (p. 13). When all is said and done, if students are to be well taught, it will be done by knowledgeable and well-supported teachers. (p. 10)

Educational reforms have, as their cumulative goal, higher student achievement, more motivated learners, critical thinkers, problem-solvers, and better-prepared citizens for an information-based, global economy. "Its goal is for people to become more skilled, more dynamic, more vital" (Ayers,
Examples of major educational reform efforts over the past 15 years include site-based management, distance learning, portfolio assessment, programs to support increasingly diverse student populations, inclusion of special education students, and magnet programs within schools. Teachers are the critical link between these reforms and student learning.

Since educational reforms touch students through teachers, reforms aimed at increased student learning can be successful to the extent that teachers are successful. To meet this challenge, educational leaders must seek a better understanding of the interplay among teacher expertise, stress, and commitment in a profession that depends for its very existence upon a resilient and effective teaching force. Darling-Hammond and Sclan (1996) offer a compelling observation of the need to focus on teachers as key to reforming education in America: "The American public education system ought to be able to guarantee that every child who is forced by public law to go to school is taught by someone who is prepared, knowledgeable, competent, and caring" (p. 92).

The current constructivist movement in education supports a shift toward teacher beliefs and research-based, classroom practices that facilitate effective learning. The central concept in constructivism is suggested by its name: Learners use their existing knowledge and backgrounds of experience to construct meanings from new information and experiences. Students who take active roles in learning activities learn better than passive students. Finally, learners construct meaning within the context of social relationships (Eggen & Kauchak, 1997; King & Rosenshine, 1993).
Constructivism offers at least three implications for the role of teaching. First, it stresses the importance of teachers' relationships to their students and to the process of learning. Second, it suggests that the beliefs and assumptions that drive teachers' decisions should place students at the center of the learning process as active meaning-makers of classroom experiences. Third, constructivism suggests that teachers' classroom practices should allow students an active and social role in learning activities.

To embrace this educational reform effort towards a more constructivist, learner-centered philosophy and approach demands an acknowledgement of the true complexity of teaching. According to Darling-Hammond and Scian (1996), constructivists share a "common view of teaching as complex, grounded in decisions that are contingent on students' needs and instructional goals, and reciprocal, that is, continually shaped and reshaped by students' responses to learning events" (p. 68). Thus, in an increasingly complex educational system, teachers' roles are likewise becoming more complex.

The successful implementation of a learner-centered focus in our nation's classrooms rests on the assumption that teachers have the resiliency and commitment to embrace this promising educational reform. In reality, high stress plagues teachers, straining their commitment to teaching as they attempt to manage increasingly complex job demands (Wise, Darling-Hammond, & Berry, 1987). The National Commission on Teaching and America's Future (1996) concluded that currently only 70% of American teachers stay in the classroom for more than three years (p. 34).

Researchers need to closely examine not only teacher beliefs about learners and the learning process, but also how their beliefs and practices
relate to their sense of commitment and positive energy in the classroom. Aligning learner centeredness, low stress, and high commitment in teachers is problematic for the profession. The Commission acknowledged this challenge in its study of American education: “School reform cannot succeed unless it focuses on creating the conditions in which teachers can teach, and teach well” (p. 6).

Background and Rationale for Study

The changes involved in becoming learner centered develop slowly over a number of years as teachers progress from novice to expert. Learner centeredness (McCombs and Whisler, 1997) is defined as a holistic focus on individual learners and their needs in conjunction with an understanding of the research on the learning process and how it can be enhanced for all learners.

Change is hard work, and it is inevitable that stresses from a variety of sources will accompany the process. The changes inherent in the shift toward learner centeredness can be expected to disrupt role expectations and lead to role stress for teachers (Connor, 1992; Fullan, 1991). Gold and Roth (1993) defined stress as

A condition of disequilibrium within the intellectual, emotional and physical state of the individual; it is generated by one’s perceptions of a situation, which result in physical and emotional reactions. It can be either positive or negative, depending upon one’s interpretations. (p. 17)

Negative stresses continually challenge teachers' commitment to stay in the profession. Commitment, defined as one's emotional attachment to teaching, is reflected in willingness to expend personal resources such as time and energy (Fullan, 1991). Commitment is critical to sustaining
teachers through the stresses of change. Firestone and Pennell (1993) concluded that "the push for more complex, intellectually demanding approaches to teaching suggests that teacher commitment will continue to be important for effective education" (p. 489). The problem is that without understanding the ways in which learner centeredness is directly related to teacher stress and commitment, sustaining teachers becomes incidental to the reform initiative.

Teacher attrition is an unfortunate and costly by-product of the profession's failure to consider teacher stress and commitment as critical issues in building a learner-centered teaching force. It takes several years of professional growth to develop a learner-centered practice, making sustained resilience and commitment essential. The cost of attrition must be measured not only in terms of lost training investment in teachers but also as a loss to students, all of whom deserve expert teachers. Rosenholtz (1991) succinctly stated the problem of retaining our most academically capable teachers: "The problem of low workplace commitment and early defection from teaching...applies especially to academically talented teachers...at a time when the teacher work-force is already numerically and academically weak" (p. 217).

Significance of the Research

The study is justified by the contributions it can make to the field of educational leadership. First, the study will add new information to basic understandings about how teachers' learner centeredness interacts with their role stress and professional commitment. Educational researchers can use the findings of this study to raise new questions in areas related to quality of teaching, stress, and career commitment.
Second, the study can help raise awareness at the educational policy level. Policy leaders can use findings to reflect on ways to shape educational reform so teachers are renewed rather than depleted by the process.

Third, the study can inform educational practice. Public school administrators at both district and school levels can use the findings of this study to support best practice as they restructure the roles of teachers. Designers of beginning teacher programs can use findings to shape induction programs that effectively support the growth of learner centeredness in novice teachers while reducing the risk and cost of early teacher burnout.

Finally, designers of university teacher preparation programs can utilize findings to help shape curricula in ways that support the development of learner-centered teachers able to maintain high commitment and low stress in the face of educational change.

In sum, this study offers potential benefits for research, policy, and practice. A better understanding of how teachers with varying degrees of learner centeredness experience role stress and commitment can contribute to an expanded research base and better-informed decisions by educational leaders who envision a highly effective, committed teaching force for the next century.

Statement of Purpose

The purpose of this study was fourfold. First, the study sought to determine the relationship, if any, between teachers' learner centeredness and their role stress and/or career commitment. The focus was to better understand how these dimensions of teachers' professional lives co-vary. Second, the study explored whether learner centeredness in teachers, as measured by the Learner-Centered Battery (McCombs, Lauer, & Peralez,
1997), contributes significantly to the prediction of their role stress and/or career commitment. Third, the study attempted to clarify whether the discrepancy between the ways teachers and students perceive teacher classroom practices is related to teacher role stress and/or commitment. Finally, the study examined whether this same discrepancy between teacher and student perceptions can predict role stress and/or career commitment in teachers.

To meet the purpose of the study, a total of eleven variables were measured. Two variables measured by the Learner-Centered Battery (McCombs, Lauer, & Peralez, 1997) included teacher beliefs and teacher classroom practices. Perceptions of teacher practices were obtained from both teachers and students. Six role stress variables, measured by the Occupational Roles Questionnaire (Osipow & Spokane, 1987), included role overload, role insufficiency, role ambiguity, role boundary, responsibility, and physical environment. Three career commitment variables, measured by the Career Commitment Measure (Carson & Bedelan, 1994), included career identity, career resilience, and career planning. Figure 1 illustrates the constructs under investigation and their intersection as the focus of the study.
Figure 1. Intersection of constructs for learner centeredness, role stress, and career commitment as focus of study.
Definitions of Constructs

Learner Centeredness

Lambert and McCombs (1998) viewed the construct "learner centeredness" as a focus on both individual learners and learning in all aspects of the educational process. A focus on individual learners encompasses their needs, talents, backgrounds, interests, and abilities. A focus on learning includes attention to research that identifies both how learning occurs and the educational practices that promote high levels of learning, achievement, and motivation. According to Lambert and McCombs, learning is defined as "the ability to retain, synthesize, and apply conceptually complex information in meaningful ways" (p. 5).

The relationships among teachers and students in a learner-centered classroom reflect authentic caring and high expectations. Learner-centered teachers strive to understand their students' backgrounds, learning strengths and weaknesses, interests, learning styles, and social needs. They design lessons that actively engage their students in learning and that allow students to link new knowledge with prior understandings. They utilize the social context of the classroom to facilitate student learning, evidenced by strategies such as cooperative learning.

Role Stress

Role stress, either positive or negative, results from a person's interactions with stressors in the work environment. Osipow and Davis (1988) found that role stress is perceptually oriented. That is, "it is the individual's perceptual filter that operates in a crucial fashion with respect to whether a given experience is construed to be stressful" (p. 2). According
to Osipow and Spokane (1987), role stress derives from six sources: (a) role
overload, when job demands exceed one's resources to meet them; (b) role
insufficiency, when one's training, education, skills, and experience fall
short of job requirements; (c) role ambiguity, when one does not understand
job priorities and/or evaluation criteria; (d) role boundary, when job
demands and loyalties conflict; (e) responsibility, when one feels inordinate
responsibility for the welfare and performance of colleagues; and (f) physical
environment, when physical conditions are consistently uncomfortable in
the job setting (p. 4).

Career Commitment

Career commitment was defined by Carson and Bedeian (1994) as
"one's motivation to work in a chosen vocation" (p. 240). They perceived the
construct of career commitment to be multidimensional. The first dimension
is career identity, or close emotional attachment to one's profession. The
second dimension is career planning, which involves determining one's
career needs and setting goals to meet them. The third dimension of career
commitment is career resilience, or one's persistence through adversity.

Research Questions

The study addressed the following eight questions:

1. Is there a relationship between learner centeredness and role stress in
teachers?
2. Is learner centeredness predictive of role stress in teachers?
3. Is there a relationship between learner centeredness and career
commitment in teachers?
4. Is learner centeredness predictive of career commitment in teachers?
5. Is the discrepancy between teachers' and students' perceptions of teacher
classroom practices related to role stress in teachers?
6. Is the discrepancy between teachers' and students' perceptions of teacher classroom practices predictive of role stress in teachers?

7. Is the discrepancy between teachers' and students' perceptions of teacher classroom practices related to career commitment in teachers?

8. Is the discrepancy between teachers' and students' perceptions of teacher classroom practices predictive of career commitment in teachers?

Research Methodology

The study utilized a correlational design, since it addressed questions about the strength and direction of relationships. Following is a brief discussion of the testing needed for each of the research questions.

Pearson product-moment correlations were used to test questions one and three, which sought to determine whether learner centeredness was related to role stress or career commitment, respectively. Some understandings that form a backdrop for testing these two questions already exist in the literature. Research on occupational stress and career commitment confirms an inverse relationship between these two constructs (Dworkin, 1985; Jackson, Schwab, & Schuler, 1986; Maslach, 1982b). In other words, as occupational stress increases, career commitment declines. The research base also documents a positive relationship between learner centeredness in teachers and student achievement and motivation to learn (McCombs & Whisler, 1997), but falls short of establishing whether learner centeredness is also related to teachers' stress and commitment.

Given what is already known about learner centeredness in teachers, occupational role stress, and career commitment, it could be expected that learner-centered teachers, in fact, would report lower role stress and higher career commitment than nonlearner-centered teachers. These hypothesized relationships are based on the assumption that learner-centered teachers
reap sufficient internal rewards from both the positive relationships they build with students and seeing students succeed academically. Therefore, the demands made of them in their role as teacher create positive stress, or eustress (Seyle, 1974), rather than distress. With negative stress at a low or at least manageable level, career commitment would remain high.

Multiple stepwise regression was used to test questions two and four, which addressed the predictive value of learner centeredness for role stress and career commitment in teachers, respectively. Based on the assumption that, since learner-centered beliefs and practices are compatible with positive relationships between teachers and students (Louis & Smith, 1992; McCombs & Whisler, 1997), these beliefs and practices may actually impact both the level of stress and the level of occupational commitment teachers experience.

Questions five and seven examined whether the discrepancy between the ways teachers and students perceive teacher classroom practices are related to role stress and career commitment in teachers. Pearson Product Moment correlations were used to test these two questions. It could be expected that the more closely teachers and students agree in their perceptions of teacher practices, the lower the role stress and the higher the commitment teachers would report.

Questions six and eight were tested using multiple regression. These two questions attempted to determine whether the discrepancy between the ways teachers and students perceive teacher classroom practices is predictive of role stress and career commitment in teachers, respectively.

Sample

A purposeful sample was drawn from the population of public school teachers in northeast Florida middle schools. The sampling procedure
consisted of identifying 12 middle schools which, by recommendation of public school administrators, were representative of schools in northeast Florida. The next step involved asking principals for access to survey their entire faculties at a faculty meeting. Eight schools covering three counties were enlisted.

Research Instrumentation

Data were gathered using five written instruments: (a) Parts I and II of the Learner-Centered Battery - Teacher Version: Grades 6-12; (b) Part I of the Learner-Centered Battery - Student Version: Grades 6-12; (c) the Occupational Roles Questionnaire; (d) the Career Commitment Measure, and (e) a demographic survey. Following is a brief description of each instrument and how it was used in the study.

Parts I and II of the Learner-Centered Battery - Teacher Version (McCombs, Lauer, & Peralez, 1997) includes a total of 60 items measuring two variables: teacher beliefs (35 items) and teacher perceptions of classroom practices (25 items). This instrument gathered data needed to answer all eight research questions. Participants indicated degree of agreement with written statements through the use of a four-point Likert scale, ranging from "strongly disagree" to "strongly agree."

Part I of the Learner-Centered Battery - Student Version (McCombs, Lauer, & Peralez, 1997) was used to measure student perceptions of teachers' classroom practices. This instrument was utilized to enable the calculation of discrepancies between teacher and student perceptions of classroom practice. Discrepancy scores were needed to answer research questions five through eight. Using a four-point Likert scale ranging from "almost never" to "almost always," students indicated the frequency that their teachers engaged in each of 25 classroom practices.
The Occupational Roles Questionnaire (Osipow & Spokane, 1987) includes ten items for each of six dimensions of occupational stress, for a total of 60 items: (a) role overload, (b) role insufficiency, (c) role ambiguity, (d) role boundary, (e) responsibility, and (f) physical environment. Data gathered with this instrument were needed to answer questions one, three, five, and seven. Teachers identified the frequency with which they experienced each listed stress factor. The scale for responding ranged from "rarely" to "most of the time" on a five-point Likert scale.

The Career Commitment Measure (Carson & Bedeian, 1994) includes twelve statements that measure three dimensions of professional loyalty: (a) career identity, (b) career resilience, and (c) career planning. Data gathered with this instrument were needed to answer questions two, four, six, and eight. Teachers indicated the degree to which they agreed with each of the twelve items. The response scale consisted of a five-point Likert scale that ranged from "strongly disagree" to "strongly agree."

Finally, an eleven-item demographic survey was used, including (a) number of years teaching, (b) number of years in current school, (c) main area of content expertise, (d) gender, (e) ethnic/cultural background, (f) highest degree earned, (g) main grade level currently teaching, (h) whether enrolled in a graduate program for advanced study, (i) location of school, (j) if planning to teach next year, and (k) whether teacher would choose teaching if starting over. Demographic information was gathered for the purpose of describing the sample and to offer the possibility of analyzing differences among subgroups of teachers during data analysis. The demographic survey was adapted from Part VI of the Learner-Centered Battery - Teacher Version: Grades 6-12 (McCombs, Lauer, & Peralez, 1997).
Limitations of the Study

The study was limited in at least three ways. First, the findings from the study cannot be generalized beyond middle school teachers in a tri-county area of northeast Florida. However, in an effort to strengthen generalizability, a serious attempt was made to select schools for study whose teachers represent all teachers in the population. Second, it is possible that the instruments may not have obtained valid information. This limitation is due to the potential of responses on indirect measures of behavior, such as self-reporting questionnaires, not to match actual behavior. Third, the lack of a qualitative component in the study limited the nature of the information gathered for analysis and may have restricted the richness of interpretation. A follow-up, qualitative study may extend both the scope and depth of understandings gained through this research effort.

Summary and Conclusions

Teachers are central to successful educational reform. Their beliefs and practices, their stress, and their commitments are inextricably linked in ways that shape the quality of education. Lack of understanding of the direct relationships among these three constructs is problematic for a profession that needs to sustain a resilient and committed teaching force.

Educational reforms cannot succeed unless those at the core of reform, the teachers, are able to sustain their energies and commitment through the lengthy implementation process. The profession can ill-afford its current 6% annual attrition of teachers while facing a need for 2 million additional teachers in the next decade (Bradley, 1999, p. 1). According to Archer (1999), dissatisfaction accounts for 25 percent of teachers' reasons for leaving the profession (p. 20). It is imperative that educational leaders understand how the processes that occur in the classroom system impact
teacher stress and commitment. Better understandings will help ensure that promising reforms, such as the movement toward more learner-centered classrooms, will be fully effective.

Classrooms, like all open systems, are complex. It is necessary but insufficient to study the influence of demographic and environmental variables on stress and commitment. New questions need to be asked, and new research, both quantitative and qualitative, both cross-sectional and longitudinal, is needed to answer them. This study posed new questions: Are there relationships among learner centeredness, role stress, and/or career commitment in teachers? Which dimensions of learner centeredness, if any, contribute significantly to the prediction of role stress and/or career commitment in teachers? Does the discrepancy between teacher and student perceptions of teachers' classroom practices relate to role stress and/or career commitment in public, middle school teachers in northeast Florida? Finally, does the discrepancy between teacher and student perceptions of teachers' classroom practices predict either role stress and/or career commitment in teachers? The answers to these questions could deepen understanding of important relationships that occur in classroom systems.

The National Commission on Teaching and America's Future (1996) has called for a serious effort and has challenged the educational community "to embrace a set of turning points that will put us on the path to serious, successful, long-term improvements in teaching and learning for America" (p. 63). Two of the Commission's milestones along the path of reform relate to the purpose of this study: (a) "all children will be taught by teachers who have the knowledge, skills, and commitments to teach children well," and (b) "quality teaching will be the central investment of
schools" (p. 63). The results of this study should fill a knowledge gap in research and contribute to shortening the path to these milestones.

Organization of the Study

The study is organized into five chapters. Chapter one introduced the study, including the problem to be addressed, the background and rationale for study, significance of the research, statement of purpose, definitions of the constructs under study, research questions, research methodology, sample, research instrumentation, and limitations of the study.

Chapter two presents a review of related literature. Included first is a discussion of the three constructs under study: (a) learner centeredness, (b) role stress, and (c) career commitment. Next is a discussion of the theoretical frame that ties the constructs together for study. A presentation of a model representing the variables as interacting parts of an open system conclude chapter two.

Chapter three describes the research methodology used in the study. The chapter begins with an introduction to the research design. Subsequent sections present definitions of variables, research questions, sample, research instrumentation, data collection procedures, and data analysis. Chapter three concludes with a discussion of the limitations and delimitations of the study.

Chapter four offers a detailed presentation and analysis of the data. Included are the design and analysis overview, demographic profiles of the sample, and findings for each of the eight research questions. Chapter four concludes with a summary statement regarding the data analysis.

Chapter five offers a summary of the study, discussion of limitations, conclusions drawn from the data analysis, and recommendations. To the
extent that chapter five contributes new insights to the educational community, the goal of this study will have been met.
CHAPTER TWO
REVIEW OF RELATED LITERATURE

A review of the literature was conducted to (a) identify and synthesize key research related to the purpose of the study, (b) identify a theoretical foundation for the proposed study, and (c) confirm need for the study. The organization of the review is topical, beginning with a discussion of the existing research on learner centeredness, role stress, and career commitment. A presentation of systems theory and its application to the three constructs under investigation follows, with a focus on the relationships among these three constructs within the open system of the classroom. Last, a summary and conclusion that confirms need for the study is presented. The review includes both primary and secondary sources, since both empirical research and the discussion of earlier findings by later researchers offer clarity to complex issues.

Learner Centeredness

This part of the literature review addresses four aspects of learner centeredness. First, a discussion of constructivism provides the conceptual context in which the learner-centered focus in education gradually developed. Second, the meaning of learner centeredness is clarified. Third, the psychological principles that underlie the beliefs and practices of learner-centered teachers are presented. Last, major findings that relate learner centeredness to learning outcomes, such as student achievement, are discussed.
To understand the current use of the term learner centeredness, one must understand the broader context of constructivism in education. The constructivist movement in education, pioneered by Withall (1969), Piaget (1977), and Vygotsky (1986), underlies the current shift from a nonlearner-centered to a more learner-centered perspective in educational practice. This movement followed a number of years during which "teaching was seen as the implementation of set routines and formulas for behavior that were standardized and disconnected from the diverse needs and responses of students" (Darling-Hammond & Sclan, 1996, p. 68). According to constructivism, (a) new understandings are actively constructed by learners, (b) new learning depends on a learner's current background of understanding, (c) authentic learning tasks are essential to meaningful learning, and (d) social interaction facilitates learning (Eggen & Kauchak, 1997; Good & Brophy, 1986; Wittrock, 1998).

The appropriateness of this way of looking at teaching and learning is underscored by the increasing diversity in the student population of the United States, particularly in urban schools. Darling-Hammond and Sclan (1996) succinctly described the backgrounds of experience that students bring to school as ranging widely across "languages, cultures, exceptionalities, learning styles, talents, and intelligences" (p. 68). This high level of diversity "demands a highly developed ability to discover what children know and can do, how they think and how they learn, and to match learning and performance opportunities to the needs of individual children" (p. 68).

One important implication of constructivism for instruction is that teachers, rather than delivering already organized and interpreted subject material to students, need to guide students to create their own
understandings. They accomplish this by utilizing students' backgrounds of understanding, cooperative learning, authentic learning problems, and active student engagement in the learning process. Withall (1975) conceptualized the role of teacher as one of facilitator: "The primary role and purpose of any teacher in any classroom is to help learners learn, inquire, problem-solve, and cope with their own emotional needs and tensions, as well as with the needs of those around them" (p. 261). The constructivist focus is not on what the teachers want to teach, but on what and how students need to learn (Bruning, Schraw, & Ronning, 1995; Eggen & Kauckak, 1997).

The term "learner centered" can be further clarified by noting that it is sometimes used synonymously with "student centered." Those who would distinguish between the two terms describe "learner" as a broader term than "student," implying that the principles associated with how people learn apply to all learners, not just elementary and secondary students in formal educational settings (McCombs & Whisler, 1997).

Student-centered education has been used historically to describe approaches and materials that focus on meeting individual student needs in a nurturing learning environment. According to Henson (1996), the teachings and work of John Dewey forshadowed this development: "By the early 1920s, with the help of Colonel Parker, John Dewey had introduced a revolution in American schools called progressive education. This student-centered system dominated American education for more than two decades" (p. 59). Educational approaches considered student centered throughout the past two decades have included the open classroom, programmed learning, individually guided instruction, and computer-based instruction. The emergence of the constructivist movement, however, led to a shift in the
conceptualization of learner centeredness. Learner centeredness came to describe the application of constructivist principles in practice rather than a description of a particular set of practices. The current construct of learner centeredness was defined by McCombs and Whisler (1997) as the perspective that couples a focus on individual learners (their heredity, experiences, perspectives, backgrounds, talents, interests, capacities, and needs) with a focus on learning (the best available knowledge about learning and how it occurs and about teaching practices that are most effective in promoting the highest levels of motivation, learning, and achievement for all learners). This dual focus, then, informs and drives educational decision making. (p. 9)

Learner centeredness is applied in the classroom through a variety of practices. Teachers create a warm climate by respecting and attending to students' points of view. According to Withall (1975), "teachers who use acceptant, problem-structuring, and challenging strategies and behaviors can create a liberating climate, thus setting the learners free to tap the potential that resides in them" (p. 262). Teachers listen well. They hold high expectations for student performance and encourage students always to put forth their best effort. Teachers' use of Socratic questioning, such as that found in paideia seminars, encourages student-generated questions and discussions. Students participate in selection of academic goals and learning tasks. Teachers support autonomy in students, who become intrinsically motivated to do high-quality work. Collaborative work among students encourages respect for diversity, reflective thinking, and broadening of learner perspectives. Students evaluate their own work and use their self-assessments to improve. Finally, students perceive assignments to be relevant. In sum, learner centeredness facilitates
motivated learners who achieve through active engagement in a learning process they perceive as meaningful. Withall (1975) articulated a basic assumption that supports a learner-centered approach: "Only the learners can learn" (p. 261). McCombs and Whisler (1997) maintained that underlying everything learner-centered teachers do is the assumption that all students want to learn.

Fourteen psychological principles (APA Task Force, 1993) extracted from research through the collaborative efforts of the APA Presidential Task Force on Psychology in Education and the Mid-Continent Regional Education Laboratory (McREL), provide a foundation for making decisions at all levels of a learner-centered educational system. These principles, in their entirety, address both the process of learning and a holistic view of the learner. The learner-centered principles are derived from both educational and psychological research and, if followed,

can ensure that educational decisions will be responsive to the student, thereby avoiding issues of alienation, boredom, perceptions of irrelevancy, and other current issues students express with the traditional educational system and reform efforts that do not consider the individual student. (p. 7)

All learners are supported by the fourteen learner-centered principles, “from children, to teachers, to administrators, to parents, and to community members involved in our education system” (p. 16). Table 1 lists the principles, categorized under four psychological factors that differentiate learners and impact both learners and the learning process.

Several research findings link learner centeredness in teachers to student and learning outcomes. Deci, Schwartz, Sheinman, and Ryan (1981)
Table 1
Psychological Principles Underlying Learner-Centered Education

Cognitive and Metacognitive Factors

1. The learning of complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience.

2. The successful learner, over time and with support and instructional guidance, can create meaningful, coherent representations of knowledge.

3. The successful learner can link new information with existing knowledge in meaningful ways.

4. The successful learner can create and use a repertoire of thinking and reasoning strategies to achieve complex learning goals.

5. Higher order strategies for selecting and monitoring mental operations facilitate creative and critical thinking.

6. Learning is influenced by environmental factors, including culture, technology, and instructional practices.

Motivational and Affective Factors

7. What and how much is learned is influenced by the learner's motivation. Motivation to learn, in turn, is influenced by the individual's emotional states, beliefs, interests and goals, and habits of thinking.

8. The learner's creativity, higher order thinking, and natural curiosity all contribute to motivation to learn. Intrinsic motivation is stimulated by tasks the learner perceives to be of optimal novelty and difficulty.

(table continues)
relevant to personal interests, and providing for personal choice and control.

9. Acquisition of complex knowledge and skills requires extended learner effort and guided practice. Without learners' motivation to learn, the willingness to exert this effort is unlikely without coercion.

**Developmental and Social Factors**

10. As individuals develop, there are different opportunities and constraints for learning. Learning is most effective when differential development within and across physical, intellectual, emotional, and social domains is taken into account.

11. Learning is influenced by social interactions, interpersonal relations, and communication with others.

**Individual Differences**

12. Learners have different strategies, approaches, and capabilities for learning that are a function of prior experience and heredity.

13. Learning is most effective when differences in learners' linguistic, cultural, and social backgrounds are taken into account.

14. Setting appropriately high and challenging standards and assessing the learner as well as learning progress – including diagnostic, process, and outcome assessment – are integral parts of the learning process.

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found in a study of 68 elementary teachers that teachers who are more autonomy oriented, a characteristic of learner centeredness, have students with more intrinsic motivation to learn and higher self-esteem than teachers who are more control oriented. Testing both in October and May revealed that these relationships were established in the first two months of the year and maintained throughout the school year. Ten years later, Deci and Ryan (1991), in a study of at-risk students, found a positive relationship between active engagement in meaningful tasks (including participation in selecting tasks), motivation, and academic achievement. Both self-reflection and self-evaluation are critical elements in a learner-centered classroom and critical to the development of self-regulation in students (Ridley, 1991; Zimmerman, 1994). The implication for practice is that teachers should teach students self-reflection, with the goal of developing intentional self-regulation. One of the most important outcomes of a learner-centered teaching approach is higher academic achievement in students (Zimmerman, 1994).

In conclusion, critical to any classroom process is the teacher’s approach, that blend of assumptions, beliefs, and practices that drives decision-making, either reflectively or from habit, about how to relate to students and influence learning. Learner-centered decision making at both the teacher and the school level is driven by a focus on both learners and learning. As one would expect, learner centeredness varies widely among teachers.

Role Stress

Role stress is a subset of the larger construct of occupational stress. This section of the literature review explores what research has revealed about (a) the basic meaning of stress; (b) its more extreme form experienced by professionals, called burnout; (c) the development of instrumentation to
measure occupational stress; and (d) both demographic and workplace correlates of role stress in teachers.

Although definitions of stress vary in the literature, a common theme among them is that stress is the result of interactions between a person and the environment. More specifically, stress is a reaction to an environmental event or situation that a person believes s/he cannot control. Gold and Roth (1993) defined stress as

A condition of disequilibrium within the intellectual, emotional and physical state of the individual; it is generated by one's perceptions of a situation, which result in physical and emotional reactions. It can be either positive or negative, depending upon one's interpretations.

(p. 17)

Stress impacts the cognitive, emotional, and physiological dimensions of the person experiencing it. Seyle (1956), assuming that people have an inherent drive to maintain homeostasis in their lives, defined stress as the disruption of equilibrium in one's experiences. When a person under stress copes successfully, equilibrium is restored and stress is minimized. The ways a person responds to stress in an effort to restore equilibrium are called coping behaviors.

Stress is perceived as positive when the restoration of equilibrium leads to sustained or increased self-esteem on the part of the person involved. Seyle (1974) called positive stress eustress, in contrast with negative stress, or distress. An additional benefit of positive stress, according to Osipow and Spokane (1984), is that it "can be a motivator that will enhance performance under the proper conditions. Coping responses, when they exist in adequate proportion, permit human beings not only to deal with a stress, but to increase their adaptive capacities as a
consequence" (p. 67). The critical feature both eustress and distress share is that both demand change in order to accommodate environmental demands: The more intense the demand for change, either positive or negative, the greater the stress.

Negative stress can develop into a condition referred to in the literature as "burnout." Friedenberger (1977) described burnout as exhaustion due to excessive demands on one's energy, strength, or resources. Maslach (1982a) defined burnout within the helping professions as "emotional exhaustion resulting from the stress of interpersonal contact" (p. 56). Gold and Roth (1993) defined burnout as a function of a person's perceptions of environmental demands:

Burnout is a syndrome which emanates from an individual's perceptions of unmet needs and unfulfilled expectations. It is characterized by progressive disillusionment, with related psychological and physical symptoms which diminish one's self-esteem. It develops gradually over a period of time. (p. 44)

Thus, the same circumstances experienced by two people may lead to burnout in one while not affecting the other this way, depending upon their beliefs about the compatibility of the situation with their needs and goals.

Farber (1991) defined burnout in transactional terms, as a work-related syndrome that stems from an individual's perception of a significant discrepancy between effort and reward. This perception is influenced by individual, organizational, and social factors. Farber differentiated between stress and burnout by describing burnout as unrelenting stress, the "final step in a progression of unsuccessful attempts to cope with a variety of negative stress conditions" (p. 32). The six steps included in Farber's model
of teacher burnout present a gradual deterioration of professional involvement:

(1) Enthusiasm and dedication give way to (2) frustration and anger in response to personal, work-related, and societal stressors, which, in turn, engender (3) a sense of inconsequentiality, which leads to (4) withdrawal of commitment and then to (5) increased personal vulnerability with multiple physical (headaches, hypertension, and so on), cognitive ("they're to blame"; "I need to take care of myself"), and emotional (irritability, sadness) symptoms, which, unless dealt with, (6) escalate until a sense of depletion and loss of caring occurs. (p. 35)

Abramson, Seligman, and Teasdale's (1978) reformulated theory of learned helplessness offers another way to view teacher burnout. Learned helplessness results when teachers believe that they cannot control the outcome of their efforts, that events are out of their control. The cognitive impact of learned helplessness is on teachers' belief systems. Motivation to proactively solve problems decreases, even in situations where teachers can influence outcomes. Emotionally, they become depressed and are prone to self-blame and low self-esteem. Teachers suffering from burnout exhibit these cognitive, motivational, and emotional responses to stress as their predominant professional style.

Learned helplessness theory incorporates attribution theory (Weiner, Frieze, Kukla, Reed, Rest, & Rosenbaum, 1971) to explain the extent to which teacher burnout will become chronic and generalized. According to attribution theory, teachers attribute their failures to factors that are: (a) internal-external, (b) stable-unstable, and/or (c) global-specific. Teachers who attribute their perceived ineffectiveness to internal, personal factors, suffer lower self-esteem than teachers who attribute their perceived failures
to external, environmental factors. Teachers who believe that recurrent or well-established factors (stable) are causing their failure are at higher risk for cognitive, motivational, and emotional deficits than teachers who believe that a failure is due to a one-time or short-lived circumstance. Finally, teachers who believe that the factors causing their failure exist in a variety of situations (global) are at higher risk for generalizing their learned helplessness to other situations than are teachers who attribute cause to a present, unique situation.

Dworkin (1987) objected to the trait definitions of burnout used by previous researchers, such as Maslach and Freudenberger, on the basis that they simply enumerate internal characteristics of those who experience the construct, making both the testing of the construct and generalizability of findings difficult. He developed a definition of burnout consistent with the sociological literature on alienation:

Burnout is an extreme form of role-specific alienation characterized by a sense that one's work is meaningless and that one is powerless to effect changes which could make the work more meaningful. This sense of meaninglessness and powerlessness is heightened by a belief that the norms associated with the role and the setting are absent, conflicting, or inoperative, and that one is alone and isolated among one's colleagues and clients. (p. 28)

Various instruments have been developed over the years to measure occupational stress and burnout. Occupational burnout entered the research spotlight in 1981 with the Maslach Burnout Inventory (Maslach & Jackson, 1986). Since then, numerous replication studies have been conducted to extend the generalizability of findings to larger populations and wider settings.
Maslach (Maslach & Jackson, 1986) defined burnout operationally in her instrument with three subscales covering 22 items: (a) depersonalization (five items), (b) personal accomplishment (eight items), and (c) emotional exhaustion (nine items). Depersonalization occurs when a teacher begins to see and describe students by group characteristics rather than as individuals. For example, a teacher may refer to disruptive students as "animals" rather than individuals (p. 78). An awareness of decline in personal accomplishment refers to negative self-evaluations of job performance. Emotional exhaustion is experienced as feelings of fatigue.

The Occupational Stress Inventory (Osipow & Spokane, 1987) was designed as a revision of Osipow and Spokane's earlier instrument, the Measures of Occupational Stress, Strain, and Coping, developed in 1981. The instrument was based on their conceptualization of occupational stress as a function of one's social role in the workplace. Two assumptions supported the development of Osipow and Spokane's (1984) Occupational Stress Inventory:

First, that people's perception of the social role assigned to them in the workplace is of critical importance, even more important than objective reality might be were it able to be measured; and second, that these social roles interact with people's capacity to cope with their negative aspects in ways that can reduce the consequent undesirable effects we call strain. (p. 71)

The entire Occupational Stress Inventory (Osipow & Spokane, 1987) consists of three separate questionnaires: (a) the Occupational Roles Questionnaire (ORQ), (b) the Personal Strain Questionnaire (PSQ), and (c) the Personal Resources Questionnaire (PRQ). The ORQ (60 items) measures respondents' perceptions of stressors in the work environment. The PSQ (40
items) measures the psychological strain resulting from environmental work stressors. Finally, the PRQ (40 items) measures the internal, coping resources respondents use in dealing with environmental work stressors and psychological strain.

Arthur (1990) reviewed the Staff Burnout Scale, based on the Maslach Burnout Inventory. This scale has 30 items covering four factors (dissatisfaction with work, psychological and interpersonal tension, physical illness and distress, and unprofessional patient relationships), and is designed for health professionals. Since burnout is a progressive condition, Arthur concluded that longitudinal studies are needed to adequately research it.

The Tedium Scale (Pines, Aronson, & Kafry, 1981) contains 21 items and treats burnout as a subset of tedium, which is a broader concept of chronic pressures from any source. Burnout, as defined by Pines et al., results from repeated stress due to working intensely with people, and is "associated with feelings of helplessness and lack of control" (p. 77).

Extensive attention since the late 1960’s has been given to studying demographic and environmental correlates of occupational stress and burnout in teachers. Many studies confirmed and extended findings from earlier works. This section concludes by addressing research since the late 1980’s that identified major correlates of stress/burnout in teachers.

Researchers have confirmed that work overload is a significant stressor for teachers. Friesen (1988) found that high workload, combined with a low sense of status and recognition, led to exhaustion and depersonalization. Job challenge, when perceived by teachers as uncontrollable, also led to exhaustion and depersonalization. Litt and Turk’s (1985) study of 291 high school teachers further confirmed the predictive
significance of low salary, paperwork overload, and low status for high stress in teachers. High stress/burnout in teachers resulted in poor health as well (Guglielmi & Tatrow, 1990; Hock, 1988; Litt & Turk, 1985). On the other hand, teachers who perceived their working conditions and relationships with colleagues as positive reported fewer somatic complaints than those who experienced these variables negatively (Litt & Turk, 1985).

The search for social, rather than psychological, factors that influence teacher stress resulted in new findings. Cole and Walker (1989) conducted an examination of burnout in the early 1980's. They concluded that significant sources of teacher stress included the social dimensions of school organization and school/community relationships. School organization included variables such as size of school, school management, teacher role, and communication (p. 106). Hock (1988) identified five predictors of burnout, all of which reflect an interactive dimension: feelings of being trapped, class discipline problems, isolation from colleagues, lack of administrative support at work, and lack of support for personal problems. Litt and Turk (1985) did not find student discipline problems to be a significant contributor to teacher stress.

The relationship of communication to teacher stress as a transactional process has been studied by Ray (1991), who explored communication structures (participation in decision making, strength of communication links, and multiplexity of communication links) to see how they related to elementary teacher satisfaction and risk of burnout. Ray found that the feature of supportive communication called "link strength" (frequency of interaction with colleagues) lessened job stress and feelings of burnout. The other feature, "multiplicity" (breadth of information shared by colleagues), did not significantly impact job stress or burnout. He concluded
that with better communication, teachers felt less role ambiguity but not less role conflict.

The issue of social support, viewed as part of the communication inputs into the classroom system, was studied by Starnaman and Miller (1992). They examined communication variables (principal support and participation in decision making), organizational stressors (workload and role stress), and job satisfaction in relationship to stress (exhaustion, depersonalization, and loss of personal accomplishment). Several findings were significant: (a) overload was positively related to role conflict, emotional exhaustion, and depersonalization; (b) role conflict was positively related to exhaustion; (c) role ambiguity was positively related to loss of personal accomplishment; and (d) principal support was negatively related to role ambiguity and role conflict. Another interesting finding suggested a positive correlation between principal support and depersonalization of students. The authors concluded that the type of support given may have been in the form of principals commiserating with disgruntled teachers about students, which may in fact have strengthened teachers' tendency to distance from students.

These findings by Starnaman and Miller (1992) were supported by Sarros and Sarros (1992), who also studied types and sources of social support as predictors of teacher stress. A quantitative study of 491 full-time classroom teachers in Australia was conducted to explore the problem of teacher burnout and social support. Social support was defined as an interpersonal transaction involving emotional concern, instrumental aid, information, and/or appraisal. Burnout was defined as a multidimensional, developmental process consisting of emotional exhaustion, depersonalization, and loss of personal accomplishment. Overall, there was
a weak but negative relationship between types of social support (time, listening/concern/trust, advice/information, feedback) and burnout. When offered by the principal, the social support variable found to be a significant predictor of both exhaustion and depersonalization was listening/concern/trust, but there were no predictor variables for loss of personal accomplishment.

When offered by peers, the social support variables found to be significant predictors of both exhaustion and depersonalization were time and listening/concern/trust. In addition, there were three predictor variables for loss of personal accomplishment: advice/information, listening/concern/trust, and feedback. The authors concluded that in light of the complexity of the types and sources of social support, global claims about the value of any one prescription for supporting teachers should be viewed with caution.

What has become clear through the research on teacher stress and burnout is that numerous correlates of teacher burnout exist, some demographic in nature and others part of the work environment. Dworkin (1987) developed propositions that defined the relationships between twelve of these major correlates and teacher burnout. He studied teachers in the Houston Independent School District from 1977-1982 in an effort to better understand the nature of teacher burnout. Dworkin obtained and analyzed four sets of data: (a) 3,444 questionnaires in 1977; (b) exit records of every teacher in the 1977 survey group who quit between 1977 and 1982; (c) 291 teachers who were members of the district’s teachers’ union; and (d) two years of academic and attendance records for 2,287 fourth, fifth, and sixth graders in the Houston Independent School District during the time the teacher surveys were collected. His propositions, listed below, are important
in that they clearly illustrate the range and complexity of burnout as a professional risk to teachers:

- The older the teacher, the less the likelihood of burnout.
- The more external the teacher’s locus of control, the greater the likelihood of burnout.
- Black teachers are less likely to burn out than any other racial group of teachers.
- The more that a teacher is racially isolated from the student body of a school, the greater the likelihood that the teacher will experience burnout.
- The likelihood of teacher burnout diminishes with each additional year of teaching that a teacher gains beyond the fifth year in the classroom.
- Tenured teachers are less likely to burn out than untenured teachers.
- The greater the income independence of a teacher (having alternative sources of income), the greater the likelihood of burnout.
- The greater the discrepancy between a teacher’s perception of the preferred role of a principal and his or her own principal’s perception of that role, the greater the likelihood that the teacher will experience burnout.
- Teachers who report experiences with racial discrimination are more likely to burn out than teachers who do not.
- The more the norms in a school are seen as supporting interracial cooperation among faculty and staff, the less likely is the experience of teacher burnout.
- The greater the support for the Singleton Ratio, which assigned faculty to schools on the basis of their race, the less the likelihood of burnout.
The more a teacher defines the racial composition of the student body of a school as desirable, the less likely it is that the teacher will report having experienced burnout. (p. 155)

In sum, the research on teacher stress confirms what teachers already know, that a multitude of complex factors challenge their energy as they strive to meet the needs of their students, their schools, and their own needs to become more effective in the classroom. With increasing stress, not only are teachers' psychological stamina and physical health at risk, but also their ability to continue teaching. Table 2 summarizes predictors of negative stress identified in this review according to their direction of relationship to stress and burnout.

Factors with an inverse relationship to stress and burnout, such as administrative support and coping resources, are those that may contribute to maintenance of teacher resilience. Conversely, factors with a positive relationship to stress and burnout, such as isolation and high workload, put teachers at professional risk.
Table 2

Factors Related to Stress and Burnout in Teachers

<table>
<thead>
<tr>
<th>Factor</th>
<th>Researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inverse Relationship to Stress and Burnout</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Dworkin (1987)</td>
</tr>
<tr>
<td>Being Black</td>
<td>Dworkin (1987)</td>
</tr>
<tr>
<td>Years of teaching experience beyond the fifth year</td>
<td>Dworkin (1987)</td>
</tr>
<tr>
<td>Tenure on the job</td>
<td>Dworkin (1987)</td>
</tr>
<tr>
<td>Low salary</td>
<td>Litt &amp; Turk (1985)</td>
</tr>
<tr>
<td>Teacher’s perceptions of school norms as supportive of interracial cooperation among faculty and staff</td>
<td>Dworkin (1987)</td>
</tr>
<tr>
<td>Support for Singleton Ratio</td>
<td>Dworkin (1987)</td>
</tr>
<tr>
<td>Teacher’s perception of racial composition of student body as desirable</td>
<td>Dworkin (1987)</td>
</tr>
<tr>
<td>Satisfaction with role status and recognition</td>
<td>Friesen (1988)</td>
</tr>
<tr>
<td>Administrative support at work</td>
<td>Hock (1988)</td>
</tr>
<tr>
<td>Support for personal problems</td>
<td>Hock (1988)</td>
</tr>
<tr>
<td>Communication “link strength”</td>
<td>Ray (1991)</td>
</tr>
<tr>
<td>Social support (listening/concern/trust) from principal</td>
<td>Sarros &amp; Sarros (1992)</td>
</tr>
<tr>
<td>Social support (time; listening/concern/trust; advice/information; feedback from peers)</td>
<td>Sarros &amp; Sarros (1992)</td>
</tr>
<tr>
<td>Coping resources, such as social support, recreation, cognitive/rational coping, and self-care</td>
<td>Osipow &amp; Spokane (1984)</td>
</tr>
</tbody>
</table>

(table continues)
Table 2. (continued)

Positive Relationships to Stress and Burnout

<table>
<thead>
<tr>
<th>External locus of control</th>
<th>Dworkin (1987)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Racial isolation from the school’s student body</td>
<td>Dworkin (1987)</td>
</tr>
<tr>
<td>Experiences of teachers with racial discrimination</td>
<td>Dworkin (1987)</td>
</tr>
<tr>
<td>Income independence of teacher</td>
<td>Dworkin (1987)</td>
</tr>
<tr>
<td>Discrepancy between teacher’s and principal’s perceptions of preferred role of principal</td>
<td>Dworkin (1987)</td>
</tr>
<tr>
<td>Job challenge seen as uncontrollable by teacher</td>
<td>Friesen (1988)</td>
</tr>
<tr>
<td>Paperwork overload</td>
<td>Litt &amp; Turk (1985)</td>
</tr>
<tr>
<td>Feelings of being trapped</td>
<td>Hock (1988)</td>
</tr>
<tr>
<td>Class discipline problems</td>
<td>Hock (1988)</td>
</tr>
<tr>
<td>Isolation from colleagues</td>
<td>Hock (1988)</td>
</tr>
<tr>
<td>Principal support (when commiserating with disgruntled teachers)</td>
<td>Starnaman &amp; Miller (1992)</td>
</tr>
<tr>
<td>Role conflict</td>
<td>Starnaman &amp; Miller (1992)</td>
</tr>
<tr>
<td>Role ambiguity</td>
<td>Starnaman &amp; Miller (1992)</td>
</tr>
<tr>
<td>High workload</td>
<td>Friesen (1988); Starnaman &amp; Miller (1992)</td>
</tr>
</tbody>
</table>
Career Commitment

The exploration of the research base on career commitment, closely related to occupational stress, is the third focus of the literature review. To better understand the nature of commitment and the factors that influence it, the review begins with a clarification of the meaning of commitment. Next is a discussion of major correlates of professional commitment, with emphasis on significant workplace conditions. Third, findings related to correlates of attrition, a result of low career commitment, are discussed. The section concludes with literature related to ways districts and schools can strengthen career commitment in teachers.

Career commitment is described variously in the literature. Buchanon (1974) defined commitment as "affective attachment to the goals and values of an organization, to one's role in relation to goals and values, and to the organization for its own sake, apart from its instrumental worth" (p. 533). Firestone and Pennell (1993) referred to professional commitment as "moral involvement" (p. 489). Rosenholtz (1991) described low commitment in terms of "absenteeism, low effort expenditure, and outright defection" (p. 140).

Definitions of commitment share the common characteristic of a psychological bonding between the individual and the object of the commitment (Firestone & Pennell, 1993). A committed person has an intrinsic desire to invest more effort, time, and resources than required into the object of the commitment. Not surprisingly, career commitment has an inverse relationship to teacher stress: As stress increases, career commitment can be expected to decrease (Dworkin, 1987).

Agreement exists among several researchers on the relationship between working conditions and commitment. Having available the essential resources for successfully meeting job requirements enhances career
commitment (Blase & Kirby, 1992; Firestone & Rosenblum, 1988; Fullan, 1992; Kushman, 1992; Reyes, 1990; Rosenholtz, 1987, 1989; Rosenholtz & Simpson, 1990; White, 1992). Essential resources include those such as adequate types and amounts of educational materials, time to collaborate with colleagues, time and opportunity to share in decisions that affect the school's operations, autonomy, and recognition for accomplishments (Darling-Hammond & Selan, 1996). Darling-Hammond and Selan concluded that

workplace conditions having to do with autonomy, decision-making authority, and administrative supports appear to exert much more influence over most teachers' views of teaching than such factors as student behavior, which is often trumpeted by the media as a major problem, sometimes the major problem, in schools. (p. 86)

Conversely, when teachers perceive conditions in the workplace as obstacles to meeting their responsibilities, they in fact become less effective as teachers and less committed to remain in teaching (Rosenholtz, 1989). Differences among teachers, such as need for growth, moderate the effects of work conditions on commitment (Hart, 1990).

Evidence exists that teachers in this decade are experiencing negative perceptions of their working conditions. The Carnegie Foundation (1990) found that almost 60% of teachers reported dissatisfaction with the amount of time available for collaboration with colleagues. The Foundation also surveyed teachers' perceptions of their professional control, which reflects both control over decisions that affect them, as well as the sense of control that derives from having the time necessary to meet daily work demands. Nearly one half of the nation's teachers in 1990 reported feelings of dissatisfaction with their level of professional control, compared to one
fourth only three years earlier. Finally, Choy, Henke, Alt, Medrich, and Bobbitt (1993) surveyed teachers in 1990-1991 to determine their perceived influence over school policy. Fewer than forty percent of public school teachers reported feeling that they had a great deal of influence over educational policies in the areas of discipline (37.0%), content of in-service training (32.9%), grouping students (27.6%), and establishing curriculum (35.2%). Secondary teachers expressed a greater sense of control over curriculum decisions than elementary teachers, while elementary teachers expressed a greater sense of control over disciplinary policy and grouping students than secondary teachers (pp. 95-98).

Teachers' career commitment has gradually declined over the past three decades. For instance, between 1961 and 1983, the proportion of teachers who reported that they would not teach if they were able to choose again grew from 11% to 36% (National Education Association, 1983). It is not surprising that this trend developed, since the growth of the women's movement throughout the 1970's and 1980's increased career options for this segment of the population from which teaching drew the bulk of its workforce (Darling-Hammond, 1984). Wangberg and Metzger (1982) found that 40% of a sample of 255 female elementary teachers, representing a cross-section of national demographics, responded in a written questionnaire that they would not choose elementary school teaching again if given a choice. Their reasons included both the attractiveness of other career options and dissatisfaction with working conditions, including paperwork overload and the declining prestige of teaching as a profession.

Darling-Hammond and Sclan (1996) summarized the considerations underlying decisions about whether to stay or leave teaching:
The relative attractions of teaching as an occupation are both monetary and nonmonetary: salary, working conditions, intrinsic work satisfactions, and opportunities for professional growth are all factors that affect recruitment and retention as individuals weigh and balance occupations against one another. (p. 84)

Existing research supports autonomy, defined as self-determination, as essential to internal motivation (Deci & Ryan, 1985) and positively correlated with commitment (Rosenholtz, 1987, 1991). Firestone and Rosenblum (1988) found that schools with teachers who had control and autonomy in their jobs had more committed faculties than schools with less autonomous teachers.

Researchers have studied teacher autonomy in conjunction with collaboration and inclusion in decision making. Several found that both collaboration with colleagues and professional freedom in the classroom contributed positively to commitment. In addition, when teachers were invited to participate in decision making, their commitment to teaching strengthened (Blase & Kirby, 1992; Harrington, 1987; Hart & Murphy, 1990; Johnson, 1990; Kushman, 1992; Louis & Smith, 1991, 1992; Rosenholtz, 1989; Sclan, 1993).

Taking a closer look at organizational factors, researchers found that administrative style related to organizational loyalty. For instance, when feedback on teacher performance was meaningful to the teacher, organizational commitment was enhanced (Louis, 1991). Firestone and Rosenblum (1988) found that schools with higher levels of commitment had teachers who shared respect and affiliation with peers and administration, received administrative support, and had high expectations for student learning.
The mix of teacher autonomy, collaboration, and shared decision making is made even more complex by other factors that impact career commitment in teachers. Rosenholtz (1991) found two additional factors beyond task autonomy and discretion that support high teacher motivation and professional commitment. First, opportunities for learning may support teacher commitment as well as growth in knowledge and skills. Second, psychic rewards, such as recognition from colleagues and parents, as well as the satisfaction that derives from seeing students progress, positively correlate with career commitment.

These findings are consistent with other findings related specifically to the role of teacher. For instance, commitment increased when teachers felt successful (Johnson, 1990; Kottkamp, Provenzo, & Cohn, 1986; Lortie, 1975; Rosenholtz, 1985) and felt their work was relevant (Firestone & Rosenblum, 1988; Newman, Rutter, & Smith, 1989). Skill variety in the role as teacher was associated with higher commitment (Hackman & Oldham, 1980), although too much role variety in teachers led to role strain, work overload, and loss of success (Gross, Giaquinta, & Bernstein, 1971). Under these circumstances, role overload and stress may reduce commitment (Dworkin, 1987).

Convinced that organizational working conditions influence career commitment, Firestone and Pennell (1993) attempted to determine the impact of differential incentive policies (merit pay, career ladders, mentor programs, and school-based incentive programs) on working conditions. They found that to the extent that differential incentives are seen as fair by teachers, support collaboration, and support teacher autonomy and participation in decision making, they contributed to working conditions that enhanced commitment. Unfortunately, according to the authors, too
many incentive policies support competition among teachers, creating working conditions that undermine teacher attitudes and behaviors necessary for high commitment.

A positive relationship between organizational commitment and student achievement has been established in the literature (Rosenholtz, 1991). Rosenholtz used teacher absenteeism as an operational definition of teacher commitment. Assuming that commitment is unidimensional, Rosenholtz believed that teachers who took frequent days off (not due to illness) were not invested in the job of teaching. She found that fourth graders’ reading and math scores declined as teacher absenteeism increased. Kushman (1992) also demonstrated a positive relationship between student achievement and teacher organizational commitment in a study of 750 urban teachers at both elementary and middle school levels.

One of the serious consequences of high stress and low commitment for schools and school systems is teacher attrition. Teachers who experience high levels of occupational stress over time become increasingly less committed to their classroom responsibilities, and some leave teaching as a career.

The search for factors that put teachers more at risk for attrition has led to several studies of teacher characteristics over the past three decades. Age is a strong predictor of how long teachers stay in teaching. The youngest and oldest teachers are more likely than mid-career teachers to quit, although for different reasons (Bobbitt, Faupel, & Burns, 1991; Heyns, 1988; Murnane, Singer, Willett, Kemple, & Olsen, 1991). Older teachers tend to retire out of teaching, while younger teachers tend to leave because of burnout and dissatisfaction with working conditions. Up to one half of
new teachers generally leave the profession within the first five years (Murnane et al., 1991).

The relationship between a second variable, gender, and teacher attrition has been affected over time by economic and social shifts in society. A generation ago young women left teaching to raise their families, returning to the classroom later in life (Grissmer & Kirby, 1987). With the growing women's movement and the opening of more career options to women and minorities, the attrition pattern for men and women are now similar. Families arrange child care so both parents can work, and women who leave teaching early in their careers are not likely to return to the classroom (Bobbit et al., 1991; Murnane et al., 1991). At the high school level, Heyns (1988) found that, although women left teaching in larger proportions than men, men were less likely to return to teaching later in life.

Like gender, the relationship between race and teacher attrition has changed in the past two decades. Whereas African American teachers used to commit to the classroom longer than white teachers, the attrition rate is now similar between the two groups. Changes in society offer an explanation: Increased access to other career options has reduced the need for minority teachers to stay in the classroom (Bobbit et al., 1991).

In a study of teacher attrition and transfer among 1,576 special education teachers in Florida, Miller, Brownell, and Smith (1999) attempted to determine workplace and teacher variables that predicted leaving or transferring from special education classrooms. Like other researchers, they found that age, certification status, perceived stress, salary, and years teaching significantly influenced attrition. They concluded that of all the variables they tested, the four strongest predictors of teacher attrition for special education teachers, including both leaving teaching and transferring
out of special education, were certification status, perceived stress, school climate, and age.

Results of the fifth follow-up of the National Longitudinal Study, 1972, completed in 1986, led Heyns (1988) to caution educational reformers against making the broad assumption that teacher attrition is always related to teacher dissatisfaction, or that the "best" teachers defect from urban, public schools. Heyns concluded that, in fact, private and suburban schools have higher rates of attrition than do public and urban schools. She defined attrition as leaving the profession rather than simply transferring to another school. Heyns argued for more research of issues related to teacher attrition: "The analyses thus far, although provocative, barely scratch the surface of research possibilities. At each juncture, the patterns of attrition in teaching raise more questions than can be addressed" (p. 31).

Plans to quit teaching generally precede actual quitting. Dworkin (1987), in his study of Houston public school teachers, found that level of burnout was a significant factor in the decision to quit. He also confirmed an inverse relationship between the following three factors and plans to quit teaching: (a) grade level, (b) years of teaching experience beyond the fifth year, and (c) salary level. Thus, teachers in higher grade levels, with more than five years experience, and/or in the higher range of salary are less likely to think about leaving classroom teaching than novice teachers earning much less in the lower grades. Heyns (1988) extended this conclusion in a longitudinal study of teacher attrition patterns by confirming that secondary teachers who do leave classroom teaching are also less likely than former elementary teachers to return to the classroom. These findings suggest that actual quitting may be related to financial independence, skills
that are translatable to other careers, and career opportunities as much as to burnout.

Given the higher attrition rate for special education teachers than other teachers, Miller, Brownell, and Smith (1999) determined that the intention to leave special education was significantly influenced by collegiality and school climate. When comparing the variables that predict intentions and actual leaving, Miller et al. cautioned against assuming that they are the same.

Rosenholtz (1991) concluded that teacher absenteeism was one way teachers left the job when actual transfer to another job was not possible or the teacher was simply too tired to attempt a career change. It appeared clear to Rosenholtz that burned-out teachers had already left the classroom in spirit, even if they remained physically. The significance of these findings for the profession is that teachers working under conditions that lead to dissatisfaction and a subsequent pattern of burnout may not quit for lack of opportunities to transfer into similar careers with financial security. To the extent that this is true, a part of our teaching force may be locked into a pattern of learned helplessness, interacting with students from a position of low self-efficacy, low self-esteem, and low motivation to change.

Rosenholtz and Simpson (1990) researched ways to support teachers' career commitment at various stages of professional development. Their study involved 1,213 elementary teachers from Tennessee. The sample represented urban, suburban, and rural schools. The authors hypothesized that commitment of teachers early in their careers would be most influenced by organizational support of task boundaries (how to manage the job of teaching), while commitment later in their careers would be most influenced by conditions that support core instructional tasks (how to improve
instruction). Scatterplots of data collected revealed three career stages of teaching: novices (1-5 years), midcareer (6-10 years), and veterans (11+ years). Midcareer teachers showed less commitment than the other two groups. Findings supported the authors' hypothesis that commitment in novice teachers depends upon support for boundary issues, while the other two groups depend upon support for core tasks. They concluded that boundary issues need to be resolved before a teacher's focus shifts to improvement of instruction, and that teachers at different stages in their careers need different types of support in order to remain committed to teaching.

The challenge to school districts to improve teacher commitment is clear. According to Darling-Hammond (1990), restructuring efforts need to ensure both administrative support for teachers and a greater degree of teacher empowerment through increased autonomy, decision making, and opportunities for collegiality. In addition, teachers must have the material supports necessary to teach well. Darling-Hammond and Sclan (1996) summarized teachers' perspectives regarding their commitment to stay in teaching: "Teachers who leave as well as those who stay in teaching all identify improving professional conditions as an effective way for schools to encourage teachers to remain in the field" (p.90).

It is generally accepted that the ultimate goal of educational reform is to improve student learning, which in turn depends upon increased teacher expertise. Research that relates learner centeredness to role stress and teacher commitment in teachers seems easily justified in that it can offer a view of how willing and able our teachers are to meet the challenges of educational reform. Hopefully, better understandings will lead to better ways to retain our best teachers. As Darling-Hammond and Sclan (1996) pointed
out, "To the extent that teaching remains a revolving door occupation for many of its recruits, investments in their preparation and gains in their knowledge about teaching are lost to the children who would ultimately profit from them" (p. 83).

Theoretical Foundation

Having explored the research base for the constructs under study, it is now necessary to explore the theoretical foundation that underlies their hypothesized relationships in the study. Open systems theory (Bolman & Deal, 1991; Katz & Kahn, 1966; Thompson, 1996) can accomplish this purpose by offering a way to both explain and predict the ways learner centeredness, stress, and commitment operate within the classroom system. A system is a "set of interdependent parts which together make up a whole because each contributes something and receives something from the whole, which in turn is interdependent with some larger environment" (Thompson, 1996, p. 289). Thus, systems are hierarchical, serving as subsystems for the larger systems that contain them. Classrooms are subsystems of the school at large, which in turn is a subsystem of the school district, which is a subsystem of the business community, and so forth. Human systems have permeable boundaries, with resources and people moving in and out as needed. For this reason, they are considered "open."

Interdependence is critical to the functioning of an open system. According to Thompson (1996), processes within a system are "significantly affected by the complexity of the organization's environment" (p. 291). More than the sum of its parts, a system's identity is shaped by multiple relationships among the parts. A change in one part of the system impacts other parts. Through feedback loops, all systems adjust to changes in their
search for equilibrium. Katz & Kahn (1966) stressed this ongoing conversion of energy: “Social organizations are flagrantly open systems in that the input of energies and the conversion of output into further energetic input consist of transactions between the organization and its environment” (p.176).

There is ample evidence of the interdependence between the classroom system and the school at large. For example, a school that includes in its mission statement a goal of preparing productive citizens depends upon teachers who can effectively meet the academic and social learning needs of students. Classroom teachers, on the other hand, depend upon a school governance and climate that support and promote high expectations for learning in their classroom systems.

The natural course of an open system is to become more differentiated over time. A system can continue to thrive if it is able to secure needed resources in exchange for the goods or services it provides. Open systems tend to input more energy than necessary to preserve long-term well-being.

Open systems consist of three basic parts and the feedback loops connecting them. Figure 2 illustrates the underlying structure of an open system and the interdependence of its parts.

![Diagram](image.png)

**Figure 2.** Parts and energy flow of an open system
Like other open systems, the structure of the classroom system consists of inputs, process, and outputs. Inputs are the conditions and resources that influence the classroom's processes. Process refers to the working part of the system, where inputs are reconfigured to meet the system's goals. Katz and Kahn (1966) referred to the reorganization of input, such as information into new thinking patterns, as through-put. Through-put is the work that occurs in the classroom, the construction of new meaning as teachers teach and students learn. Finally, outputs are the results of the classroom process. Outputs, in turn, generate feedback to both inputs and process, completing a continuous transformation and cycling of the system's energy. Following is a more detailed clarification of each part of the classroom system as it relates to the study.

**Inputs**

Inputs are environmental and demographic conditions and resources, such as principal support, time, materials, types of communication, years of teacher experience, and teacher training. Inputs can originate within the classroom system or enter the classroom from any environment larger than the classroom, such as the business community or the school at large. Table 3 presents examples of classroom system inputs from four contributing environments.
Table 3

Sources and Examples of Inputs in the Classroom System

<table>
<thead>
<tr>
<th>Source</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Within Classroom</strong></td>
<td>Class size&lt;br&gt;Teacher experience&lt;br&gt;In-class instructional materials</td>
</tr>
<tr>
<td><strong>School at Large</strong></td>
<td>Principal expectations&lt;br&gt;Principal support&lt;br&gt;Materials and equipment&lt;br&gt;Staff development opportunities&lt;br&gt;School climate&lt;br&gt;School culture&lt;br&gt;School governance</td>
</tr>
<tr>
<td><strong>Business Community</strong></td>
<td>Donations of materials/equipment&lt;br&gt;Guest speakers&lt;br&gt;Apprenticeship programs&lt;br&gt;Distance learning partnerships</td>
</tr>
<tr>
<td><strong>Community at Large</strong></td>
<td>Volunteer tutors/mentors&lt;br&gt;Field trip support</td>
</tr>
</tbody>
</table>

**Process**

Central to the study is the teaching process, illustrated in Figure 3. The teaching process includes teacher beliefs and classroom practices (which operationally define learner centeredness for the study), role stress, and commitment to teaching. Researchers have not yet established whether teachers' beliefs and/or classroom practices are related to and affect their own role stress and career commitment. The dashed arrow in Figure 3 reflects (a) the hypothesized relationships between learner centeredness (beliefs and practices) and teacher stress and commitment; and (b) the
hypothesized, predictive influence of learner centeredness on teacher stress and commitment.

![Diagram of Teaching Process in the Classroom System](image)

**Figure 3.** Teaching process in the classroom system as a function of the interactions among the teacher’s beliefs, practices, role stress, and career commitment.
Outputs

Outputs comprise the final part of the classroom system. Outputs are the results of process. For example, student motivation to learn (output) is likely to increase as a result of the teacher's use of cooperative learning strategies (McCombs & Whisler, 1997). Other examples of major outputs are student achievement and teacher satisfaction. Outputs provide feedback to the classroom environment and lead to modifications of inputs in a self-perpetuating cycle. For instance, an increased willingness on the part of students to learn (output) will challenge the teacher (feedback) to provide similar types of learning activities. New resources may be brought into the system (inputs), additional learning strategies may be utilized (process), and student achievement and motivation may continue to climb (outputs).

In sum, systems theory explains teacher beliefs and practices, role stress, and career commitment as interactive parts of the teaching process within the context of the classroom system. Figure 4 illustrates the final integration of the parts of the classroom system into a model for the study. Inputs include the resources available to teachers for educational purposes. Process is the work, or through-put, of the system. The degree to which teachers act on the learner-centered principles through their beliefs and practices determines their degree of learner centeredness. The dashed arrow in the model represents the hypothesized relationships among learner centeredness, role stress, and career commitment. Outputs are the results of the processes operating in the classroom. Examples of outputs are student achievement, motivation to learn, and teacher satisfaction. Finally, informational feedback loops enable all parts of the system to inform one another, so that adjustments can be made that will enable the classroom to continually thrive. It is not yet known whether learner centeredness in
Figure 4. Integrated model of the classroom as an open system. The shaded section was the focus of the study.
teachers, defined by their beliefs and practices, has a significant relationship to, or influence on, the degree of their stress and/or commitment. This study aims to establish whether these relationships do, in fact, exist.

Conclusions

An exploration of learner centeredness, teachers' stress, and commitment can be framed by open systems theory. Learner centeredness refers to a teacher's focus on meeting individual needs of students. Positive rapport and mutual respect between teacher and student is an important feature of learner centeredness. The movement to a learner-centered perspective requires that teachers shift their assumptions and beliefs about how students learn, what students need, and their own role as teachers in the learning process. Learner-centered teachers align their assumptions, beliefs, and practices with key psychological principles of learning.

The preponderance of research on stress and burnout has focused on environmental and demographic covariates. A closer exploration of whether learner centeredness is related to, or influences, stress is needed. One might expect that, because learner centeredness demands a high level of performance, it may augment negative stress. On the other hand, since outcomes of a learner-centered practice are positive for students and teachers, one might expect learner centeredness to predict more eustress than distress. The direct relationship between learner centeredness and stress deserves study.

No longer can we assume that teachers, given increasingly diversified opportunities to leave teaching, will develop commitment to teaching as a career. Teachers in fields such as math, clinical speech, and science are lured to private industry by higher starting salaries, greater earning potential, and broader career opportunities (Darling-Hammond & Sclan,
The problem of attrition is exacerbated by the fact that "baby boomer" teachers are aging, paving the way for significant loss of experienced teachers through retirement. The rebuilding of this sector of the professional ranks depends upon the commitment of teachers who are both willing and able to become experts in best practice. Since the answers to this pressing issue may depend upon a better understanding of how learner centeredness relates to, or predicts, teacher commitment, it is a research effort well worth making.

Given the current research base related to the constructs under study, the need is clear. Darling Hammond and Sclan (1996) stressed the price students pay for the shortage of qualified and committed teachers: "Shortages of qualified teachers translate into enlarged class sizes, lack of access to higher level courses, and lower quality teaching" (p.82). The researcher has undertaken this study to better understand the direct relationships among learner centeredness, role stress, and career commitment in the hope of joining with others to meet this important challenge.

The next chapter presents the study's research design. Included are definitions of variables, the research questions, descriptions of the sample, research instrumentation, data collection procedures, and data analysis. The chapter closes with a discussion of the limitations and delimitations of the study.

Chapter four presents findings and analysis of the data. Chapter five summarizes the study, presents conclusions based on the data analysis, and offers implications for practice and recommendations for further research.
CHAPTER THREE
RESEARCH METHODOLOGY

The study utilized a correlational design. First, it sought to determine if learner centeredness was related to role stress and/or career commitment in teachers. Second, it tested whether discrepancy between teachers’ and students' perceptions of teacher classroom practices was related to role stress and/or career commitment. Third, it explored the predictive value of variables measuring learner centeredness, including discrepancy, for role stress and/or career commitment. This chapter describes the seven components of the research design: (a) definitions of variables, (b) research questions, (c) sample, (d) research instrumentation, (e) data collection, (f) data analysis, and (g) limitations and delimitations of the study.

Definitions of Variables

The 60 items of the Learner-Centered Battery - Teacher Version and the 25 items of the Learner-Centered Battery - Student Version (McCombs, Lauer, & Peralez, 1997) operationalized the study's three variables related to learner centeredness:

- **Teacher Beliefs:** Both learner-centered and nonlearner-centered beliefs about learners, learning, and teaching
- **Teacher Practices:** Teacher perceptions of classroom practices as learner or nonlearner centered
- **Discrepancy:** Differences between teacher and student perceptions of the teacher's classroom practices
The 60 items of the Occupational Role Questionnaire (Osipow & Spokane, 1987) operationalized the six variables that measured role stress:

- Role Overload (RO): Extent to which an individual is unable to accomplish workloads
- Role Insufficiency (RI): Degree to which individual's training, skills, education, and experience fall short of job requirements
- Role Ambiguity (RA): Degree to which expectations, evaluation criteria, and priorities are unclear to the individual
- Role Boundary (RB): Degree to which individual is experiencing conflicting role demands and loyalties in the work setting.
- Responsibility (R): Degree to which individual feels a great deal of responsibility for the performance and welfare of others on the job.
- Physical Environment (PE): Extent to which individual is exposed to high levels of environmental toxins or extreme physical conditions.

Finally, the 12 items of the Career Commitment Measure (Carson & Bedelian, 1994) operationalized the three variables that measured career commitment in teachers:

- Career Identity: Close emotional attachment to profession
- Career Resilience: Persistence through adversity
- Career Planning: Determining career needs and goal-setting

Appendix A groups the items in these three instruments under the study's variables.
Research Questions

The study sought to answer the following eight questions:

1. Is there a relationship between learner centeredness and role stress in teachers?
2. Is learner centeredness predictive of role stress in teachers?
3. Is there a relationship between learner centeredness and career commitment in teachers?
4. Is learner centeredness predictive of career commitment in teachers?
5. Is the discrepancy between teachers' and students' perceptions of teacher classroom practices related to role stress in teachers?
6. Is the discrepancy between teachers' and students' perceptions of teacher classroom practices predictive of role stress in teachers?
7. Is the discrepancy between teachers' and students' perceptions of teacher classroom practices related to career commitment in teachers?
8. Is the discrepancy between teachers' and students' perceptions of teacher classroom practices predictive of career commitment in teachers?

Sample

A purposeful sample was drawn from the population of middle school (grades 6-8) public school teachers in three counties of northeastern Florida. A teacher was defined as any person with a teaching contract in a school district whose job description included the instruction of students.

The population was limited to middle school teachers in the tri-county area for three reasons. First, the population was limited to keep the scope of the study manageable. Second, middle school teachers are in the unique position of transitioning students from the elementary to the high school system, suggesting that perhaps the teachers themselves reflect a blend of elementary and secondary teachers. To the extent that this may be
true, the findings from this study may actually represent a broader range of teachers than that targeted by the research design. The third reason was related to feasibility: The validity and reliability of the secondary (grades 6-12) level of the Learner-Centered Battery (McCombs, Lauer, & Peralez, 1997) was established, whereas the elementary (grades 1-6) form of the instrument was being field tested by its authors.

Sampling was conducted in two stages. In the first stage, twelve middle schools were identified in northeast Florida. To accomplish this, administrators in three counties were informally asked to identify schools in their school district that, in their informed judgment, were representative of their county's middle schools in general. Of the twelve schools identified, the principals at eight of these schools were invited to involve their entire faculties in the study. All eight principals accepted. Appendix B presents the letter of invitation to principals.

Florida's Department of Education (1999) publishes information annually about its schools in the Florida School Indicators Report. The most recent data available covers the 1997-98 school year. Table 4 presents school descriptors that reflect the nature of the study's eight schools.

The Florida Department of Education (1999) has established uniform definitions of terms that apply to all schools in its 67 counties. These definitions describe the indicators listed in Table 4, as follows:

(1) "Number of students" refers to the total number of students in school as measured during the fall survey period in October; also known as fall membership.

(2) "Free/reduced-price lunch" refers to the percentage of students eligible for free or reduced-price lunch. The percentage is arrived at by dividing the number of students eligible for free or reduced-price
Table 4

Demographic Descriptors for Schools Used in the Study

<table>
<thead>
<tr>
<th>School</th>
<th>Number of Students</th>
<th>Free/Reduced -Price Lunch</th>
<th>Limited English Proficient</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,210</td>
<td>4.8</td>
<td>0.3</td>
<td>16.6</td>
</tr>
<tr>
<td>2</td>
<td>1,073</td>
<td>38.7</td>
<td>0.4</td>
<td>35.5</td>
</tr>
<tr>
<td>3</td>
<td>2,144</td>
<td>19.4</td>
<td>0.7</td>
<td>23.2</td>
</tr>
<tr>
<td>4</td>
<td>1,210</td>
<td>12.7</td>
<td>0.0</td>
<td>12.0</td>
</tr>
<tr>
<td>5</td>
<td>1,303</td>
<td>33.2</td>
<td>2.6</td>
<td>54.6</td>
</tr>
<tr>
<td>6</td>
<td>1,100</td>
<td>32.1</td>
<td>1.0</td>
<td>61.4</td>
</tr>
<tr>
<td>7</td>
<td>830</td>
<td>35.9</td>
<td>0.9</td>
<td>21.6</td>
</tr>
<tr>
<td>8</td>
<td>977</td>
<td>13.1</td>
<td>0.1</td>
<td>19.0</td>
</tr>
<tr>
<td>Average (1-8)</td>
<td>--</td>
<td>23.7</td>
<td>0.8</td>
<td>29.0</td>
</tr>
</tbody>
</table>

Florida Department of Education Totals by County and State for Middle Schools

<table>
<thead>
<tr>
<th>County</th>
<th>Total Students</th>
<th>Limited English Proficient</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clay</td>
<td>6,244</td>
<td>20.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Duval</td>
<td>29,087</td>
<td>34.6</td>
<td>1.2</td>
</tr>
<tr>
<td>St. Johns</td>
<td>4,284</td>
<td>27.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Florida</td>
<td>519,014</td>
<td>44.2</td>
<td>4.3</td>
</tr>
</tbody>
</table>

lunch, as determined in October, by the student membership in October.

(3) "Limited English proficient (LEP) students" refers to the percentage of the school's students who are LEP students served in English for
speakers of other languages (ESOL) programs. The count is determined at the end of the school year. Percentages are calculated by dividing the total number of LEP/ESOL students by the school's total enrollment. For this indicator, total enrollment includes all students who were in attendance at any time during the school year. (4) "Mobility" refers to the rate at which students move into or out of the school population during the school year, shown as a percentage. It is calculated by dividing (a) the total number of new entries, re-entries, and withdrawals during the 180-day school year by (b) the total number of students who were enrolled at the start of the school year. (pp. 2-5)

The final sample consisted of 318 teachers. Table 5 presents the sample size and compares it with the teacher population (Florida Department of Education, 1999). The most recent data available were from the 1997-98 school year.

Table 5
Comparison of Sample Size to Population Size

<table>
<thead>
<tr>
<th>County</th>
<th>Schools</th>
<th></th>
<th>Teachers</th>
<th></th>
<th>Percent of Teachers Sampled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sample</td>
<td>Population</td>
<td>Sample</td>
<td>Population</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Clay</td>
<td>1</td>
<td>6</td>
<td>45</td>
<td>480</td>
<td>9.4</td>
</tr>
<tr>
<td>Duval</td>
<td>5</td>
<td>26</td>
<td>207</td>
<td>2,266</td>
<td>9.1</td>
</tr>
<tr>
<td>St. Johns</td>
<td>2</td>
<td>5</td>
<td>66</td>
<td>372</td>
<td>17.7</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>37</td>
<td>318</td>
<td>3,118</td>
<td>10.2</td>
</tr>
</tbody>
</table>
The Florida State Department of Education (1999) also reports annually on two teacher characteristics: (a) average years of classroom teaching experience, and (b) the percentage of teachers in each school with a master’s degree or higher. For the 1997-98 school year, the average number of years experience was 10.7 for teachers in Clay County. For Duval County, the average number of years reported was 12.5 years. For St. Johns County, the average number of years experience was 11.7 years. Because these data are for a year prior to the study and were gathered differently from the study’s categorical approach, a direct comparison between the two sources of data is difficult. The Florida School Indicators Report is included to give an overview of teacher experience for a recent year. Table 6 presents a description of the sample in terms of categories of years of experience. School one is in Clay County, Schools two through six are in Duval County, and schools seven and eight are in St. John's County. Almost half (46%) of the teachers in the total sample have taught at least 16 years. Not shown in the table, the average number of years of teaching experience statewide was 12.3 for 1997-98 (Florida Department of Education, 1999).
Table 6
Years of Teaching Experience for Sample

<table>
<thead>
<tr>
<th>Source</th>
<th>1-2 Years P</th>
<th>3-5 Years P</th>
<th>6-10 Years P</th>
<th>11-15 Years P</th>
<th>16+ Years P</th>
<th>Total P</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 1</td>
<td>11</td>
<td>9</td>
<td>9</td>
<td>13</td>
<td>58</td>
<td>100</td>
</tr>
<tr>
<td>School 2</td>
<td>16</td>
<td>18</td>
<td>9</td>
<td>9</td>
<td>48</td>
<td>100</td>
</tr>
<tr>
<td>School 3</td>
<td>3</td>
<td>3</td>
<td>14</td>
<td>35</td>
<td>45</td>
<td>100</td>
</tr>
<tr>
<td>School 4</td>
<td>9</td>
<td>22</td>
<td>9</td>
<td>17</td>
<td>43</td>
<td>100</td>
</tr>
<tr>
<td>School 5</td>
<td>8</td>
<td>21</td>
<td>14</td>
<td>14</td>
<td>43</td>
<td>100</td>
</tr>
<tr>
<td>School 6</td>
<td>19</td>
<td>13</td>
<td>15</td>
<td>15</td>
<td>38</td>
<td>100</td>
</tr>
<tr>
<td>School 7</td>
<td>11</td>
<td>16</td>
<td>13</td>
<td>16</td>
<td>44</td>
<td>100</td>
</tr>
<tr>
<td>School 8</td>
<td>14</td>
<td>0</td>
<td>19</td>
<td>33</td>
<td>34</td>
<td>100</td>
</tr>
<tr>
<td>County</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clay</td>
<td>11</td>
<td>9</td>
<td>9</td>
<td>13</td>
<td>58</td>
<td>100</td>
</tr>
<tr>
<td>Duval</td>
<td>11</td>
<td>15</td>
<td>12</td>
<td>17</td>
<td>45</td>
<td>100</td>
</tr>
<tr>
<td>St. Johns</td>
<td>12</td>
<td>11</td>
<td>15</td>
<td>21</td>
<td>41</td>
<td>100</td>
</tr>
<tr>
<td>Total Sample</td>
<td>11</td>
<td>13</td>
<td>12</td>
<td>18</td>
<td>46</td>
<td>100</td>
</tr>
</tbody>
</table>

The highest degrees earned by teachers in the study is presented in Table 7. Also reported is the percentage of teachers with a master's degree or higher from the Florida School Indicators Report for the year 1997-98.
Table 7

**Highest Degree Earned by Sample and Population**

<table>
<thead>
<tr>
<th>Source</th>
<th>Bachelor P</th>
<th>Master P</th>
<th>Ph.D. or Ed.D. P</th>
<th>Sample P</th>
<th>Population P</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 1</td>
<td>58</td>
<td>40</td>
<td>2</td>
<td>42</td>
<td>-</td>
</tr>
<tr>
<td>School 2</td>
<td>69</td>
<td>29</td>
<td>2</td>
<td>31</td>
<td>-</td>
</tr>
<tr>
<td>School 3</td>
<td>65</td>
<td>30</td>
<td>5</td>
<td>35</td>
<td>-</td>
</tr>
<tr>
<td>School 4</td>
<td>58</td>
<td>38</td>
<td>4</td>
<td>42</td>
<td>-</td>
</tr>
<tr>
<td>School 5</td>
<td>58</td>
<td>39</td>
<td>4</td>
<td>43</td>
<td>-</td>
</tr>
<tr>
<td>School 6</td>
<td>55</td>
<td>40</td>
<td>4</td>
<td>44</td>
<td>-</td>
</tr>
<tr>
<td>School 7</td>
<td>51</td>
<td>49</td>
<td>0</td>
<td>49</td>
<td>-</td>
</tr>
<tr>
<td>School 8</td>
<td>67</td>
<td>33</td>
<td>0</td>
<td>33</td>
<td>-</td>
</tr>
<tr>
<td>County</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clay</td>
<td>58</td>
<td>40</td>
<td>2</td>
<td>42</td>
<td>28</td>
</tr>
<tr>
<td>Duval</td>
<td>61</td>
<td>35</td>
<td>4</td>
<td>39</td>
<td>29</td>
</tr>
<tr>
<td>St. Johns</td>
<td>56</td>
<td>44</td>
<td>0</td>
<td>44</td>
<td>36</td>
</tr>
<tr>
<td>Total Sample</td>
<td>60</td>
<td>38</td>
<td>3</td>
<td>41</td>
<td>-</td>
</tr>
</tbody>
</table>

Although the data are for two different years, they offer a general picture of the levels of education attained by teachers in both the sample and the population for the counties under study. Not shown in the table, 33.1% of teachers statewide held a masters degree or higher (Florida Department of Education, 1999).
Research Instrumentation

Data were collected using five survey instruments: (a) the Learner-Centered Battery - Teacher Version: Grades 6-12 (McCombs, Lauer, and Peralez, 1997), (b) the Learner-Centered Battery - Student Version: Grades 6-12 (McCombs, Lauer, and Peralez, 1997), (c) the Occupational Roles Questionnaire (Osipow & Spokane, 1987), (d) the Career Commitment Measure (Carson & Bedeian, 1994), and (e) a demographic survey adapted from the Learner-Centered Battery.

Learner Centered Battery (LCB)

Two scales of the Learner-Centered Battery - Teacher Version (McCombs, Lauer, and Peralez, 1997) operationalized the construct of learner centeredness for the study. The variables were teacher beliefs (Part I) and teacher self-perceptions of classroom practices (Part II). Together, these two parts of the LCB comprise a 60-item self-report inventory. All teachers participating in the study completed both parts.

The three Learner-Centered Battery (McCombs, Lauer, and Peralez, 1997) scales that were not used in the study were excluded because the variables they measure were not essential for testing any of the study's questions. A second basis for this decision was one of feasibility. Inclusion in the study of two other instruments, plus a demographic survey, raised great concern for the total time needed for administration. Thus, non-essential scales were excluded.

The 35 items measuring teacher beliefs are grouped under three factors: (a) learner-centered beliefs about learners, learning, and teaching; (b) nonlearner-centered beliefs about learners; and (c) nonlearner-centered beliefs about learning and teaching. Teachers used a four-point Likert scale to respond to each item. They chose degrees of agreement (strongly disagree,
somewhat disagree, somewhat agree, or strongly agree) with statements such as "Even with feedback, some students just can't figure out their mistakes" (item 11).

For the purpose of this study, a single measure of teacher beliefs was obtained by computing a mean score for all 35 items in Part I of the Learner-Centered Battery - Teacher Version (McCombs, Lauer, and Peralez, 1997). Thus, the three factors described in the previous paragraph were combined to create one variable, called teacher beliefs. Reverse coding of negative items during data entry was necessary to ensure that the highest mean score possible (4) indicated the highest degree of learner-centeredness.

The twenty-five items in Part II of the Learner-Centered Battery - Teacher Version (McCombs, Lauer, and Peralez, 1997) measure teacher perceptions of classroom practices under four factors: (a) creates positive interpersonal relationships; (b) honors student voice, provides challenge, and encourages perspective taking; (c) encourages higher-order thinking and self-regulation; and (d) adapts to individual developmental differences. As in Part I, teachers used a four-point Likert scale to respond to each item. They selected the frequency (almost never, sometimes, often, or almost always) with which they participate in particular classroom practices, such as "I encourage students to challenge themselves while learning" (item 45).

For the purpose of this study, a single measure of teacher practices was obtained by computing a mean score for all 25 items in Part II of the Learner-Centered Battery - Teacher Version. Thus, the four factors described in the previous paragraph were combined to create one variable, called teacher practices. All 25 items are positively stated, so no reverse coding was necessary.
One scale (Part I) in the Learner-Centered Battery - Student Version (McCombs, Lauer, and Peralez, 1997) was used to determine the discrepancy between teacher and student perceptions of teacher practices. Twenty-five items measured student perceptions of their teacher's classroom practices under four factors: (a) creates positive interpersonal relationships; (b) honors student voice, provides challenge, and encourages perspective taking; (c) encourages higher-order thinking and self-regulation; and (d) adapts to individual developmental differences. These factors are the same as those in the teacher version. Students used a four-point Likert scale to anonymously respond to each item in the survey. Responses indicated how often (almost never, sometimes, often, and almost always) the teacher engaged in particular classroom practices, such as "helps me think through what I'm interested in learning" (item 7).

For the purpose of this study, a single measure of student perceptions of teacher practices was obtained by computing a mean score for all 25 items in this scale. Thus, the four factors described in the previous paragraph were combined. All 25 items are positively stated, so no reverse coding was necessary.

The appropriateness of using overall mean scores for the three variables of teacher beliefs, teacher practices, and student perceptions of teacher practices was confirmed by P. A. Lauer (personal communication, July 16, 1998) and later reconfirmed by B. L. McCombs (personal communication, July 7, 1999). According to Lauer and McCombs, the validity and reliability of the scales were not threatened by using composite measures, and reverse coding was appropriate in that it retained the meanings of the values in the Likert scale.
Participating teachers (N = 192) administered the student survey to all students in one class of their choice. The total number of students completing the student survey was 4,539.

The data gathered in Part I of the teacher survey and Part I of the student survey were used to calculate the discrepancy between teacher and student perceptions of teacher classroom practices. Teachers' mean scores were subtracted from their classes' mean scores for this scale.

McCombs and Lauer (1997) conducted a study to determine the reliability and content validity of the teacher and student versions of the Learner-Centered Battery. A national sample consisting of middle and high school students (N= 9,722) and teachers (N = 908) was used in the validation process. Data analysis was accomplished by correlational testing, factor analysis, and multiple regression. Phase I findings demonstrated moderate to high internal consistencies (alpha coefficients ranging from .67 to .96) for the teacher and student surveys. Correlations were found to range from low to moderate but positive (.18 - .35) between student and teacher scales for perception of teacher practices (pp. 9-10).

**Occupational Roles Questionnaire (ORQ)**

The Occupational Roles Questionnaire is one of three surveys that comprise the Occupational Stress Inventory (Osipow & Spokane, 1987). The decision to use the ORQ and exclude the other two surveys was guided by the purpose of the study. Since the need was to investigate teachers' role stress in the classroom system, the Occupational Roles Questionnaire (ORQ) was the appropriate choice. Respondents used a five-point Likert scale (rarely or never, occasionally, often, usually, most of the time) to express the frequency with which they experience the situations described by each of 60 items.
Establishment of validity and reliability for the Occupational Stress Inventory scales was conducted with a norming sample of 909 adults employed in "schools, service organizations, and manufacturing settings" (Osipow & Spokane, 1987, p. 10). Two-week test-retest reliability of the ORQ was established at .90 for the total questionnaire score and between .56 and .94, inclusive, for the individual scales. An internal consistency (alpha) coefficient of .89 for total ORQ score was established with a sample of 549 working adults. Alpha coefficients for individual ORQ scales range from .71 to .94 (p.9).

**Career Commitment Measure (CCM)**

The Career Commitment Measure (Carson & Bedeian, 1994) contains 12 items that measure three dimensions of career commitment. The authors defined career commitment as multidimensional motivation to work in a given vocation. The three dimensions of career commitment include (a) career identity (close emotional attachment), (b) career resilience (persistence through adversity), and (c) career planning (determining career needs and goal-setting). Respondents indicated the frequency with which they identified with the items listed, using a five-point Likert scale (never, seldom, often, frequently, always).

Two pilot tests and a field test were conducted to validate the Career Commitment Measure (Carson & Bedeian, 1994) and determine its reliability. A random sample of employees, representing a wide range of work settings and professions, was used in the study, as well as MBA students and undergraduates to ensure adequate score variation in item responses. The final sample size used in field testing was 476 (response rate of 36.8%). The original 87 items of the CCM were reduced to 12 in the final instrument. Ancova, correlation, factor analysis, and discriminant analysis were used in
data analysis. At the conclusion of the process, reliability coefficients (alpha) ranged from .79 to .85 for the three subscales. Correlational testing established construct validity for the CCM.

**Demographic Survey**

Part VI of the Learner-Centered Battery - Teacher Version (McCombs, Lauer, and Peralez, 1997) contains 15 demographic variables in a multiple-choice format. Each participating teacher responded to 11 of these items. The items used were (a) number of years teaching, (b) number of years at current school, (c) main area of content expertise, (d) gender, (e) ethnic/cultural background, (f) highest degree earned, (g) main grade level currently teaching, (h) whether enrolled in a graduate program for advanced study, (i) location of school, (j) whether planning to teach next year, and (k) whether would choose to go into teaching again, given current knowledge of teaching.

The four items not used were excluded for their nonrelevance to the study's interest. These items were (a) number of credit hours beyond bachelor's degree, omitted because this information is more detailed than necessary; (b) type of school (public or private), omitted because the sample included only public school teachers; (c) highest certificate level obtained, omitted since the sample was restricted to middle school teachers; and (d) number of students in your class, omitted because the unit of study was the teacher, not students.

**Data Collection**

The principals at each of the eight schools used in the study granted an interview during which the investigator explained the purpose of the study, asked permission to gather data from the entire teaching faculty, and asked for a date to gather data. The investigator gave participating
principals a written description of the study to assist them in soliciting faculty cooperation (Appendix B). Two principals preferred that the investigator survey their faculty through in-house, faculty mail, while the remaining six agreed to arrange faculty meetings for data collection. The decision to collect data mid-year was based on two assumptions: (a) the first semester was needed for the relationships in classroom systems to develop, and (b) data obtained mid-year would likely reflect true and consistent perceptions of both teachers and students.

The following steps were followed when gathering data from teachers at faculty meetings. The researcher

1. introduced the study and the voluntary nature of teachers’ participation.
2. distributed written consent forms. Teachers willing to participate signed consent forms and placed them in a large brown envelope. Each teacher kept a copy of the consent form (Appendix C).
3. gave each teacher a packet of survey materials that included (a) an answer sheet, (b) the Learner-Centered Battery - Teacher Version, (c) the Career Commitment Measure, (d) the demographic survey, (e) the Occupational Role Questionnaire, (f) 40 copies of the Learner-Centered Battery - Student Version, and (g) a set of written instructions (Appendix D).
4. gave oral directions to teachers for completing all instruments. Teachers immediately completed all but the student version of the Learner-Centered Battery.
5. had subjects place their completed surveys in a box.
6. asked each teacher to choose one class and have all the students in the class complete the Learner-Centered Battery - Student Version within four days.
7. asked teachers to place completed student surveys in a box in the school office or other designated location. The researcher supplied the box.

8. returned to the schools a later dates to pick up the completed student surveys.

9. followed up each visit to schools with written thank you letters to the principals and teachers (Appendix E).

The investigator included a page of written directions with the survey materials at the two schools where teachers were accessed through their mailboxes. The direction page covered the information presented in person at the other schools (Appendix D). As with the other six schools, the investigator arranged a return date with the principals for picking up both teacher and student surveys, and returned to these two schools at later dates to do so. She also followed up every visit with written thank you letters to the principals and teachers. Table 8 presents the rates of return by school, county, and sample total.
Table 8
Rates of Return for Participating Schools

<table>
<thead>
<tr>
<th>School Number</th>
<th>Given Out N</th>
<th>Returned N</th>
<th>Percent Returned</th>
<th>Method of Gathering Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>49</td>
<td>45</td>
<td>92</td>
<td>Faculty Meeting</td>
</tr>
<tr>
<td>2</td>
<td>70</td>
<td>46</td>
<td>66</td>
<td>Teacher Mailboxes</td>
</tr>
<tr>
<td>3</td>
<td>38</td>
<td>37</td>
<td>97</td>
<td>Faculty Meeting</td>
</tr>
<tr>
<td>4</td>
<td>58</td>
<td>25</td>
<td>43</td>
<td>Teacher Mailboxes</td>
</tr>
<tr>
<td>5</td>
<td>57</td>
<td>52</td>
<td>91</td>
<td>Faculty Meeting</td>
</tr>
<tr>
<td>6</td>
<td>51</td>
<td>47</td>
<td>92</td>
<td>Faculty Meeting</td>
</tr>
<tr>
<td>7</td>
<td>45</td>
<td>45</td>
<td>100</td>
<td>Faculty Meeting</td>
</tr>
<tr>
<td>8</td>
<td>23</td>
<td>21</td>
<td>91</td>
<td>Faculty Meeting</td>
</tr>
<tr>
<td>Total</td>
<td>391</td>
<td>318</td>
<td>81</td>
<td></td>
</tr>
</tbody>
</table>

Data Analysis

In addition to using descriptive statistics to obtain demographic profiles, two statistical tests were used to examine the study's research questions. First, Pearson product-moment correlations were used to test questions one, three, five, and seven in order to determine if learner centeredness was related to either role stress or career commitment. Second, multiple stepwise regression was used to examine questions two, four, six, and eight. Regression was selected because it could answer the question: What percentage of variance found in role stress and commitment among teachers can be explained by the degree of their learner centeredness.
and/or the discrepancy between teachers' and students' perceptions of classroom practices?

A discrepancy score was computed for each teacher by subtracting mean scores for teacher self-perceptions of classroom practices from the mean scores for their students' perceptions of their classroom practices. The discrepancy, in other words, expressed a comparison of mean scores for teachers' and students' perceptions of teacher classroom practices.

Limitations and Delimitations of the Study

Several limitations and delimitations of the study deserve mention. First, findings from this study were delimited by design to middle school teachers in public schools located in three counties of northeastern Florida. Similarities between the teachers in the study and those outside the demographic area of research cannot be assumed, and generalizations of any conclusions to teachers outside the sample must be made with caution.

Second, findings of relationship do not imply causation. The relationships established in this study through Pearson product-moment correlations established covariation only.

Third, a possible limitation of the sampling procedure was that principals of faculty with high morale may have been more willing to grant access than those with highly stressed, burned-out teaching staff. To the extent that this was true, the data collection may have fallen short of capturing the full range of teacher experiences in terms of role stress and career commitment. A serious attempt was made to select schools whose teachers represented all teachers in the population. High rates of return for surveys (81% overall), ranging from 43 to 100 percent across the eight schools, suggest that the full range of learner centeredness in teachers was well represented.
Fourth, a potential limitation was sample size. It is important to have a large enough sample to prevent a Type II error. Simply stated by Rudestam and Newton (1992), committing a Type II error "means that an effect existed, but was not detected by the study. As the probability of a Type II error increases, the power of the study decreases" (p.64). Effort was made to avoid a Type II error by collecting a sample of 318 teachers. Gaining access to whole faculties at several schools, keeping the length of time necessary to complete the surveys at a realistic level, and arranging with principals to share the results of the study with faculty at a later date, all seemed to enhance teacher willingness to participate in the study.

Finally, the lack of a qualitative component in the study limited the nature of the information gathered for analysis and potentially restricted the richness of interpretation. Because of the amount of time engagement required from teachers to participate, and the risk of participants becoming resistant to participation if more were asked, the decision to exclude a qualitative component seemed justified.

The next chapter presents the findings of the research and a discussion of the data analysis. Chapter five presents both a summary of the study and recommendations.
CHAPTER FOUR
PRESENTATION AND ANALYSIS OF DATA

Eight research questions framed this study's examination of learner centeredness, role stress, and career commitment among middle school teachers in northeast Florida:

1. Is there a relationship between learner centeredness and role stress in teachers?
2. Is learner centeredness predictive of role stress in teachers?
3. Is there a relationship between learner centeredness and career commitment in teachers?
4. Is learner centeredness predictive of career commitment in teachers?
5. Is the discrepancy between teachers' and students' perceptions of teacher classroom practices related to role stress in teachers?
6. Is the discrepancy between teachers' and students' perceptions of teacher classroom practices predictive of role stress in teachers?
7. Is the discrepancy between teachers' and students' perceptions of teacher classroom practices related to career commitment in teachers?
8. Is the discrepancy between teachers' and students' perceptions of teacher classroom practices predictive of career commitment in teachers?

Design and Analysis Overview

The correlational design consisted of surveying teachers at eight of the 37 public middle schools in three counties of northeast Florida. Data were gathered midyear during faculty meetings at six of the eight schools. At the other two schools, the principals opted to put the surveys into teacher
mailboxes. Written instructions that matched those given at the faculty meetings were included with the mailbox surveys. The purpose of matching oral and written instructions was to support consistent understandings across sites. All teachers were asked at the time of data gathering to have any one of their instructional classes anonymously complete a survey about teacher practices.

Five survey instruments tapped the following six data sources: (a) teachers' self-perceptions of their beliefs about learners and learning, (b) teachers' self-perceptions of their classroom practices, (c) teachers' role stress, (d) teachers' career commitment, (e) student perceptions of their teachers' classroom practices, and (f) demographic information about the participating teachers.

A Cronbach alpha reliability coefficient was obtained for each of the scales used in the study, with results that are consistent with those established in the norming of each of the instruments. First, an alpha of .88 was obtained for the 60 items (teacher beliefs and self-perceptions of classroom practices) of the Learner-Centered Battery - Teacher Version. Second, an alpha of .95 was obtained for the 25 items (student perceptions of teacher classroom practices) of the Learner-Centered Battery - Student Version. These reliability coefficients are consistent with subscale alphas, ranging from .67 to .96, obtained by McCombs and Lauer (1997, p. 9) during validation of the teacher and student surveys. An alpha of .90 was obtained for the 60 items (role stress) of the Occupational Roles Questionnaire, compared with an overall alpha of .89 obtained by Osipow and Spokane (1984, p. 78). Finally, an alpha of .80 was obtained for the 12 items (career identification, career resilience, and career planning) of the Career
Commitment Measure, compared with subscale alphas obtained by Carson and Bedeian (1994) ranging from .79 to .85 (p. 237).

Analysis of data was accomplished through the use of a variety of statistical tests. A level of statistical significance was set at .05 for all tests. Pearson product-moment correlations were used to answer questions one, three, five, and seven, which focused on existence and strengths of relationships. Multiple stepwise regression was used to answer questions two, four, six, and eight, which focused on explaining variance. The difference (student mean minus teacher mean for perceptions of classroom practices) was computed to determine a discrepancy score for each teacher. Frequency, descriptive, and t-tests were used to analyze the demographic data.

Sample Profiles

Administrators in three Florida counties (Clay, Duval, and St. Johns) identified schools they perceived as representative of their district's public middle schools. The principals at eight of these schools (22% of 37 schools) were invited to involve their entire faculties in the study. All accepted, thus creating the sample used in the study. A total of 391 teachers received surveys. Eighty-one percent (N = 318) of the teachers signed informed consent forms and completed the surveys. Table 8 in Chapter three lists the rates of return by school. Of the 318 teachers who participated in the study, 192 (60%) had a class complete the student survey.

Teachers completed a demographic survey with eleven items: (a) number of years teaching, (b) number of years at current school, (c) main area of content expertise, (d) gender, (e) ethnic/cultural background, (f) highest degree earned, (g) main grade level currently teaching, (h) whether currently enrolled in a graduate program, (i) location of school, (j) plans to
teach next year, and (k) whether regretting having gone into teacher as a career. Tables 9 through 18 present the demographic profiles for each of these items.

Table 9

**Composition of Sample by Number of Years Teaching**

<table>
<thead>
<tr>
<th>Teaching Experience</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 years</td>
<td>36</td>
<td>12</td>
</tr>
<tr>
<td>3-5 years</td>
<td>42</td>
<td>13</td>
</tr>
<tr>
<td>6-10 years</td>
<td>39</td>
<td>12</td>
</tr>
<tr>
<td>11-15 years</td>
<td>54</td>
<td>17</td>
</tr>
<tr>
<td>16 or more years</td>
<td>144</td>
<td>46</td>
</tr>
<tr>
<td>Total</td>
<td>315</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 10

**Composition of Sample by Number of Years at Current School**

<table>
<thead>
<tr>
<th>Years at Current School</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year</td>
<td>48</td>
<td>16</td>
</tr>
<tr>
<td>2 years</td>
<td>40</td>
<td>13</td>
</tr>
<tr>
<td>3-4 years</td>
<td>70</td>
<td>22</td>
</tr>
<tr>
<td>5-7 years</td>
<td>70</td>
<td>22</td>
</tr>
<tr>
<td>8 or more years</td>
<td>85</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>313</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 11  
Composition of Sample by Main Area of Content Expertise

<table>
<thead>
<tr>
<th>Main Area of Content Expertise</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language arts</td>
<td>61</td>
<td>19</td>
</tr>
<tr>
<td>Social studies or science</td>
<td>92</td>
<td>29</td>
</tr>
<tr>
<td>Mathematics</td>
<td>54</td>
<td>17</td>
</tr>
<tr>
<td>Special education</td>
<td>34</td>
<td>11</td>
</tr>
<tr>
<td>Other</td>
<td>74</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>315</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 12  
Composition of the Sample by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>222</td>
<td>71</td>
</tr>
<tr>
<td>Male</td>
<td>91</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>313</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 13
Composition of Sample by Ethnic/Cultural Background

<table>
<thead>
<tr>
<th>Ethnic/Cultural Background</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Afro-American</td>
<td>55</td>
<td>17</td>
</tr>
<tr>
<td>Caucasian</td>
<td>243</td>
<td>77</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>315</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 14
Composition of Sample by Highest Degree Earned

<table>
<thead>
<tr>
<th>Highest Degree Earned</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor</td>
<td>188</td>
<td>59</td>
</tr>
<tr>
<td>Master</td>
<td>119</td>
<td>38</td>
</tr>
<tr>
<td>Ph.D. or Ed.D.</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>316</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 15

Composition of Sample by Main Grade Level Currently Teaching

<table>
<thead>
<tr>
<th>Main Grade Level Teaching</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sixth grade</td>
<td>74</td>
<td>24</td>
</tr>
<tr>
<td>Seventh grade</td>
<td>76</td>
<td>24</td>
</tr>
<tr>
<td>Eighth grade</td>
<td>81</td>
<td>26</td>
</tr>
<tr>
<td>Ninth grade</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Mixture of grades</td>
<td>78</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>313</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 16

Composition of Sample by Enrollment in Graduate Program

<table>
<thead>
<tr>
<th>Enrolled in Graduate Program</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>39</td>
<td>12</td>
</tr>
<tr>
<td>No</td>
<td>275</td>
<td>88</td>
</tr>
<tr>
<td>Total</td>
<td>314</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 17
Composition of Sample by Location of School

<table>
<thead>
<tr>
<th>Location of School</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suburban</td>
<td>246</td>
<td>77</td>
</tr>
<tr>
<td>Urban</td>
<td>72</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>318</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 18
Composition of Sample by Plan to Teach Next Year

<table>
<thead>
<tr>
<th>Planning to Teach Next Year</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>308</td>
<td>98</td>
</tr>
<tr>
<td>No</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>315</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 19
Composition of Sample by Regret for Choosing Teaching as a Career

<table>
<thead>
<tr>
<th>Would Choose to Go into Teaching Again</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>206</td>
<td>67</td>
</tr>
<tr>
<td>No</td>
<td>101</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>307</td>
<td>100</td>
</tr>
</tbody>
</table>
In sum, almost half (46%) of the participating teachers have taught at least 16 years. Half (51%) have been at their current schools for one to four years, while slightly more than one-quarter (27%) have been at their current schools for eight or more years. Approximately three-quarters (77%) of the teachers were teaching in suburban schools, while the rest were teaching in urban schools. Four instructional areas of expertise were represented (11 - 29%) in the sample: language arts, social studies or science, mathematics, and special education. Teachers were distributed evenly (23 - 26%) across sixth, seventh, eighth, and mixed grade assignments.

Almost three-fourths of the teachers (71%) were female, while 29 percent were male. Approximately three-fourths of the teachers were Caucasian (77%), compared with Afro-American (17%), Other (3%), Hispanic (2%), and Asian (1%).

The majority (60%) of the teachers had a bachelors degree, while a little more than one-third (38%) had earned their masters degree. Only three percent were teaching with a terminal degree. Most of the teachers (88%) were not pursuing a graduate program.

Finally, teacher responses to the last two demographic questions raised an interesting contrast between immediate plans to continue teaching and feelings about being teachers. Although almost all (98%) of the teachers indicated that they were planning to teach again next year, one-third (33%) reported that, given what they know now, they would not choose to go into teaching again.

Findings and Analyses

Question One

The first question was: Is there a relationship between learner centeredness and role stress in teachers? Table 20 presents correlations
obtained from eight variables. The two variables of teacher beliefs and teacher practices comprise learner centeredness, while the other six variables are subscales of role stress.

Table 20

Correlations between Subscales of Learner Centeredness and Role Stress

<table>
<thead>
<tr>
<th>Subscales of Role Stress</th>
<th>Teacher Beliefs</th>
<th>Teacher Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role Overload</td>
<td>-.07</td>
<td>.06</td>
</tr>
<tr>
<td>N</td>
<td>289</td>
<td>288</td>
</tr>
<tr>
<td>Role Insufficiency</td>
<td>-.27*</td>
<td>-.31*</td>
</tr>
<tr>
<td>N</td>
<td>294</td>
<td>293</td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>-.16*</td>
<td>-.32*</td>
</tr>
<tr>
<td>N</td>
<td>294</td>
<td>291</td>
</tr>
<tr>
<td>Role Boundary</td>
<td>-.19*</td>
<td>-.25*</td>
</tr>
<tr>
<td>N</td>
<td>286</td>
<td>282</td>
</tr>
<tr>
<td>Responsibility</td>
<td>-.03</td>
<td>.03</td>
</tr>
<tr>
<td>N</td>
<td>287</td>
<td>285</td>
</tr>
<tr>
<td>Physical Environment</td>
<td>.01</td>
<td>.00</td>
</tr>
<tr>
<td>N</td>
<td>289</td>
<td>287</td>
</tr>
</tbody>
</table>

Note. * = p < .05

Six statistically significant relationships were found between the subscales for learner centeredness and teacher role stress. All were negative, suggesting that as teachers' beliefs and practices became more learner centered, role stress decreased. Figure 5 illustrates the strength of each relationship. In addition, Figure 5 presents those interrelationships among the subscales for role stress that tested at a significant level. As one would expect, all are positive.
Figure 5. Significant relationships among subscales of learner centeredness and role stress

Note. Solid lines relate learner centeredness to role stress. Dashed lines show interrelationships among dimensions of role stress.
Testing revealed three significant but negative relationships between Teacher Beliefs and Role Stress. First, the relationship between Teacher Beliefs and Role Boundaries (-.19) indicates that teachers who are more learner-centered may be slightly less stressed due to conflicting job demands and loyalties than less learner-centered teachers. Second, the relationship between Teacher Beliefs and Role Insufficiency (-.27) indicates that teachers who are more learner centered in their beliefs about learners and learning are somewhat less likely to experience stress when training, education, skills, and experience fall short of job requirements than teachers whose beliefs are less learner centered. Third, the relationship between Teacher Beliefs and Role Ambiguity (-.16) indicates that more learner-centered teachers are slightly less likely than nonlearner-centered teachers to feel ambivalent about their job priorities and how to meet evaluative expectations.

Three significant findings, all at a low but negative level of significance, related Teacher Practices to variables measuring role stress in teachers. Teachers who were more learner centered in their classroom practices were likely to experience lower levels of stress due to Role Insufficiency (-.31), Role Boundary (-.25), and Role Ambiguity (-.32) than those whose practices were less learner centered.

Finally, a low but positive relationship (.31) was established between Teacher Beliefs and Teacher Practices. Teachers who tended to be more learner centered in their beliefs were also more likely to engage in classroom practices that were learner centered than teachers with less learner-centered beliefs.
**Question Two**

The second question was: Is learner centeredness predictive of role stress in teachers? Learner centeredness was found to correlate with three of the six subscales that measure role stress: Role Insufficiency, Role Boundary, and Role Ambiguity. Multiple stepwise regression was used to determine if the variance in any of these three subscales could be explained by any of the 60 survey items used to measure teacher beliefs or teacher practices. A presentation and examination of results for each of the three subscales follows. Items identified with an asterisk were reverse coded for negative phrasing.

First, a multiple stepwise regression identified five of the total 60 items from the Teacher Beliefs and Teacher Practices scales as predictors of Role Insufficiency in teachers. Following is a listing of these predictors:

1. Practice #57: I ask students to listen to and think about their classmates' opinions, even when they don't agree with them.

2. Belief #34: Seeing things from the students' point of view is the key to their good performance in school.

3. Practice #44: I demonstrate to students that I care about them.

4. Belief #30: My acceptance of myself as a person is more central to my classroom effectiveness than the comprehensiveness of my teaching skills.

5. *Belief #20: No matter what I do or how hard I try, there are some students that are unreachable.

The strongest predictor, entered first in the stepwise regression procedure, was Practice #57. This item accounted for 10% of the total variance in Role Insufficiency. Each subsequent step contributed additional predictive value to the model. Together, the five items explained 19.32% of the variance. Table 21 presents the results from this regression.
Table 21

Analysis of Variance for Role Insufficiency

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>24.71</td>
<td>5</td>
<td>4.94</td>
<td>12.98</td>
<td>.0000</td>
</tr>
<tr>
<td>Residual</td>
<td>103.21</td>
<td>271</td>
<td>.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>127.92</td>
<td>276</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Analysis of variance was significant for the prediction of Role Insufficiency, F(5.271) = 12.98, p < .05. Five of the 60 items that measured learner centeredness in teachers, all with p values of .0000, were found to be significant contributors to prediction of Role Insufficiency. Table 22 presents the stepwise model parameter estimates for the five items.
Table 22
Parameter Estimates for Prediction of Role Insufficiency

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameter Estimate (B)</th>
<th>SE B</th>
<th>t</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.37</td>
<td>.26</td>
<td>16.62</td>
<td>.0000</td>
</tr>
<tr>
<td>P57: I ask students to listen to and think about their classmates' opinions, even when they don't agree with them.</td>
<td>- .19</td>
<td>.05</td>
<td>-3.63</td>
<td>.0003</td>
</tr>
<tr>
<td>B34: Seeing things from the students' point of view is the key to their good performance in school.</td>
<td>- .13</td>
<td>.06</td>
<td>-2.33</td>
<td>.0206</td>
</tr>
<tr>
<td>P44: I demonstrate to students that I care about them.</td>
<td>- .15</td>
<td>.06</td>
<td>-2.61</td>
<td>.0097</td>
</tr>
<tr>
<td>B30: My acceptance of myself as a person is more central to my classroom effectiveness than the comprehensiveness of my teaching skills.</td>
<td>- .13</td>
<td>.05</td>
<td>-2.75</td>
<td>.0064</td>
</tr>
<tr>
<td>*B20: No matter what I do or how hard I try, there are some students that are unreachable.</td>
<td>- .10</td>
<td>.04</td>
<td>-2.49</td>
<td>.0136</td>
</tr>
</tbody>
</table>

*Note. * = Item reverse scored for negative phrasing

Second, a multiple stepwise regression identified five of the total 60 items from the Teacher Beliefs and Teacher Practices scales as predictors of Role Ambiguity in teachers. Following is a listing of these predictors.

1. Practice #57: I ask students to listen to and think about their classmates' opinions, even when they don't agree with them.
2. Practice #56: I help students feel like they belong in the class.
3. Belief #14: I can't help feeling upset and inadequate when dealing with difficult students.

4. Belief #33: I am responsible for what students learn and how they learn.

5. Belief #22: Students will be more motivated to learn if teachers get to know them at a personal level.

The strongest predictor, entered first in the stepwise regression procedure, was Practice #57. This item accounted for 12% of the total variance in Role Ambiguity. Each subsequent step contributed additional predictive value to the model. Together, the five items explained 20.96% of the variance. Table 23 presents the results from this regression.

Table 23
Analysis of Variance for Role Ambiguity

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>44.43</td>
<td>7</td>
<td>6.35</td>
<td>12.65</td>
<td>.0000</td>
</tr>
<tr>
<td>Residual</td>
<td>133.93</td>
<td>267</td>
<td>.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>178.36</td>
<td>274</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Analysis of variance was significant for the prediction of Role Ambiguity, F(7,267) = 12.65, p < .05. Five of the 60 items that measured learner centeredness in teachers, all with p values of .0000, were found to be significant contributors to prediction of Role Ambiguity. Table 24 presents the stepwise model parameter estimates for the five items.
Table 24

Parameter Estimates for Prediction of Role Ambiguity

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameter Estimate (B)</th>
<th>SE B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.45</td>
<td>.25</td>
<td>13.66</td>
<td>.0000</td>
</tr>
<tr>
<td>P57: I ask students to listen to and think about their classmates' opinions, even when they don't agree with them.</td>
<td>-.19</td>
<td>.05</td>
<td>-3.56</td>
<td>.0004</td>
</tr>
<tr>
<td>P56: I help students feel like they belong in the class.</td>
<td>-.15</td>
<td>.06</td>
<td>-2.45</td>
<td>.0149</td>
</tr>
<tr>
<td>*B14: I can't help feeling upset and inadequate when dealing with difficulty students.</td>
<td>-.12</td>
<td>.04</td>
<td>-3.19</td>
<td>.0016</td>
</tr>
<tr>
<td>*B33: I am responsible for what students learn and how they learn.</td>
<td>.11</td>
<td>.04</td>
<td>2.46</td>
<td>.0145</td>
</tr>
<tr>
<td>B22: Students will be more motivated to learn if teachers get to know them at a personal level.</td>
<td>-.10</td>
<td>.06</td>
<td>-2.13</td>
<td>.0341</td>
</tr>
</tbody>
</table>

Note: * = Item reverse scored for negative phrasing

Third, a multiple stepwise regression identified six of the total 60 items from the Teacher Beliefs and Teacher Practices scales as predictors of Role Boundary in teachers. Following is a listing of these predictors.

1. Practice #44: I demonstrate to students that I care about them.
2. Belief #34: Seeing things from the students' point of view is the key to their good performance in school.
3. Practice #57: I ask students to listen to and think about their classmates' opinions, even when they don't agree with them.
4. *Belief #20: No matter what I do or how hard I try, there are some students that are unreachable.

5. *Belief #33: I am responsible for what students learn and how they learn.

6. Practice #48: I appreciate my students for who they are beyond whatever their accomplishments might be.

The strongest predictor, entered first in the stepwise regression procedure, was Practice #44. This item accounted for 10.73% of the total variance in Role Boundary. Each subsequent step contributed additional predictive value to the model. Together, the six items explained 21.59% of the variance. Table 25 presents the results from this regression.

Table 25
Analysis of Variance for Role Boundary

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>26.83</td>
<td>6</td>
<td>4.48</td>
<td>12.02</td>
<td>.0000</td>
</tr>
<tr>
<td>Residual</td>
<td>97.45</td>
<td>262</td>
<td>.37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>285.40</td>
<td>268</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Analysis of variance was significant for the prediction of Role Boundary, $F(6,262) = 12.02, p < .05$. Six of the 60 items that measured learner centeredness in teachers, all with $p$ values of .0000, were found to be significant contributors to prediction of Role Boundary. Table 26 presents the stepwise model parameter estimates for the six items.
Table 26

Parameter Estimates for Prediction of Role Boundary

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameter Estimate (B)</th>
<th>SE B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.52</td>
<td>.29</td>
<td>12.06</td>
<td>.0000</td>
</tr>
<tr>
<td>P44: I demonstrate to students that I care about them.</td>
<td>-.24</td>
<td>.06</td>
<td>-3.75</td>
<td>.0002</td>
</tr>
<tr>
<td>B34: Seeing things from the students' point of view is the key to their good performance in school.</td>
<td>-.14</td>
<td>.06</td>
<td>-2.53</td>
<td>.0120</td>
</tr>
<tr>
<td>P57: I ask students to listen to and think about their classmates' opinions, even when they don't agree with them.</td>
<td>-.21</td>
<td>.06</td>
<td>-3.65</td>
<td>.0003</td>
</tr>
<tr>
<td>*B20: No matter what I do or how hard I try, there are some students that are unreachable.</td>
<td>-.09</td>
<td>.04</td>
<td>-2.46</td>
<td>.0145</td>
</tr>
<tr>
<td>*B33: I am responsible for what students learn and how they learn.</td>
<td>.11</td>
<td>.05</td>
<td>2.36</td>
<td>.0192</td>
</tr>
<tr>
<td>P48: I appreciate my students for who they are beyond whatever their accomplishments might be.</td>
<td>.13</td>
<td>.07</td>
<td>2.01</td>
<td>.0500</td>
</tr>
</tbody>
</table>

Note. * = Item reverse scored for negative phrasing
Question Three

The third question was: Is there a relationship between learner centeredness and career commitment in teachers? Table 27 presents the correlations obtained from five variables.

Table 27

Correlations between Subscales of Learner Centeredness and Career Commitment

<table>
<thead>
<tr>
<th>Subscales of Career Commitment</th>
<th>Teacher Beliefs</th>
<th>Teacher Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Identity</td>
<td>.28*</td>
<td>.32*</td>
</tr>
<tr>
<td>N</td>
<td>293</td>
<td>290</td>
</tr>
<tr>
<td>Career Resilience</td>
<td>.30*</td>
<td>.15*</td>
</tr>
<tr>
<td>N</td>
<td>294</td>
<td>292</td>
</tr>
<tr>
<td>Career Planning</td>
<td>.12*</td>
<td>.36*</td>
</tr>
<tr>
<td>N</td>
<td>295</td>
<td>293</td>
</tr>
</tbody>
</table>

Note. * = p < .05

In contrast to the inverse relationship found between learner centeredness and role stress, all of the significant relationships among the subscales measuring learner centeredness and career commitment were positive. Figure 6 illustrates the strength of each relationship.

Six significant relationships linked learner centeredness to career commitment. The coefficients ranged from low to moderate (.12-.36). Teachers who were more learner centered in their beliefs about learners and learning had stronger emotional attachments to their profession (low), more persistence through adversity (low), and were better able to make and carry out career plans (low) than teachers who were less learner centered.
Figure 6. Significant relationships among subscales of learner centeredness and career commitment.

Note. Solid lines relate learner centeredness to career commitment. Dashed lines show interrelationships among dimensions of career commitment.

Likewise, teachers whose practices were more learner centered were more likely to have stronger emotional ties to teaching as a profession (moderate), more resilience (low), and were more able than nonlearner-centered teachers to identify their career needs and set goals to achieve them (moderate).

Figure 6 also shows correlations among the three dimensions of career commitment. These correlations indicated that the strongest statistical relationship, moderate but positive (.35), was between Career [details follow]
Identity and Career Planning. The relationship between Career Resilience and Career Identity (.21), as well as the relationship between Career Resilience and Career Planning (.23), was low but positive.

**Question Four**

The fourth question was: Is learner centeredness predictive of career commitment in teachers? Learner centeredness was found to correlate with all three subscales that measure career commitment: Career Identity, Career Resilience, and Career Planning. Multiple stepwise regression was used to determine whether the variance in any of these subscales could be explained by any of the 60 survey items used to measure Teacher Beliefs or Teacher Practices. Items identified with an asterisk were reverse coded for negative phrasing.

First, a multiple stepwise regression identified seven of the total 60 items from the Teacher Beliefs and Teacher Practices scales as predictors of Career Identity. Following is a listing of these predictors:

1. Practice #44: I demonstrate to students that I care about them.
2. Belief #1: Students have more respect for instructors they see and can relate to as real people, not just as teachers.
3. *Belief #17: It's just too late to help some students.
4. Practice #51: I teach students how to deal with stress that affects their learning.
5. Practice #37: I allow students to express their own unique thoughts and beliefs.
6. Belief #34: Seeing things from the students' point of view is the key to their good performance in school.
7. *Belief #27: Good teachers always know more than their students.
The strongest predictor, entered first in the stepwise regression procedure, was Practice #44. This item accounted for 11.33% of the total variance in Career Identity. Each subsequent step contributed additional predictive value to the model. Together, the seven items explained 24.91% of the variance. Table 28 presents the results from this regression.

Table 28
Analysis of Variance for Career Identity

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>44.43</td>
<td>7</td>
<td>6.35</td>
<td>12.65</td>
<td>.0000</td>
</tr>
<tr>
<td>Residual</td>
<td>133.93</td>
<td>267</td>
<td>.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>178.36</td>
<td>274</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Analysis of variance was significant for the prediction of Career Identity, $F(7,267) = 12.65$, $p < .05$. Seven of the 60 items that measured learner centeredness in teachers, all with $p$ values of .0000, were found to be significant contributors to prediction of Career Identity. Table 29 presents the stepwise model parameter estimates for the seven items.
Table 29

Parameter Estimates for Prediction of Career Identity

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameter Estimate (B)</th>
<th>SE B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.64</td>
<td>.32</td>
<td>5.18</td>
<td>.0000</td>
</tr>
<tr>
<td>P44: I demonstrate to students that I care about them.</td>
<td>.30</td>
<td>.07</td>
<td>4.17</td>
<td>.0000</td>
</tr>
<tr>
<td>B1: Students have more respect for instructors they see and can relate to as real people, not just as teachers.</td>
<td>.13</td>
<td>.05</td>
<td>2.62</td>
<td>.0087</td>
</tr>
<tr>
<td>*B17: It's just too late to help some students</td>
<td>.13</td>
<td>.05</td>
<td>2.69</td>
<td>.0075</td>
</tr>
<tr>
<td>P51: I teach students how to deal with stress that affects their learning.</td>
<td>-.20</td>
<td>.06</td>
<td>-3.40</td>
<td>.0008</td>
</tr>
<tr>
<td>P37: I allow students to express their own unique thoughts and beliefs.</td>
<td>.21</td>
<td>.07</td>
<td>3.02</td>
<td>.0028</td>
</tr>
<tr>
<td>B34: Seeing things from the students' point of view is the key to their good performance in school.</td>
<td>.15</td>
<td>.06</td>
<td>2.29</td>
<td>.0230</td>
</tr>
<tr>
<td>*B27: Good teachers always know more than their students.</td>
<td>.09</td>
<td>.05</td>
<td>2.08</td>
<td>.0388</td>
</tr>
</tbody>
</table>

Note. * = Item reverse scored for negative phrasing

Second, a multiple stepwise regression identified six of the total 60 items from the Teacher Beliefs and Teacher Practices scales as predictors of Career Resilience in teachers. Following is a listing of these predictors:
1. Practice #44: I demonstrate to students that I care about them.

2. *Belief #5: Too many students expect to be coddled in school.

3. *Belief #12: My most important job as a teacher is to help students meet well-established standards of what it takes to succeed.

4. *Belief #14: I can't help feeling upset and inadequate when dealing with difficult students.

5. *Belief #8: It's impossible to work with students who refuse to learn.

6. Practice #39: I change learning assignments when students appear to be failing.

The strongest predictor, entered first in the stepwise regression procedure, was Practice #44. This item accounted for 8.03% of the total variance in Career Resilience. Each subsequent step contributed additional predictive value to the model. Together, the six items explained 25.36% of the variance. Table 30 presents the results from this regression.

Table 30
Analysis of Variance for Career Resilience

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>85.39</td>
<td>6</td>
<td>14.23</td>
<td>15.24</td>
<td>.0000</td>
</tr>
<tr>
<td>Residual</td>
<td>251.28</td>
<td>269</td>
<td>.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>336.67</td>
<td>275</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Analysis of variance was significant for the prediction of Career Resilience, $F(6,269) = 15.24, p < .05$. Six of the 60 items that measure learner centeredness in teachers, all with $p$ values of .0000, were found to
be significant contributors to prediction of Career Resilience. Table 31 presents the stepwise model parameter estimates for the six items.

Table 31
Parameter Estimates for Prediction of Career Resilience

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameter Estimate (B)</th>
<th>SE B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-.10</td>
<td>.39</td>
<td>-.27</td>
<td>.7915</td>
</tr>
<tr>
<td>P44: I demonstrate to students that I care about them.</td>
<td>.43</td>
<td>.08</td>
<td>5.22</td>
<td>.0000</td>
</tr>
<tr>
<td>*B5: Too many students expect to be coddled in school.</td>
<td>.23</td>
<td>.07</td>
<td>3.51</td>
<td>.0005</td>
</tr>
<tr>
<td>*B12: My most important job as a teacher is to help students meet well-established standards of what it takes to succeed.</td>
<td>.27</td>
<td>.07</td>
<td>3.76</td>
<td>.0002</td>
</tr>
<tr>
<td>*B14: I can't help feeling upset and inadequate when dealing with difficult students.</td>
<td>.23</td>
<td>.06</td>
<td>3.54</td>
<td>.0005</td>
</tr>
<tr>
<td>*B8: It's impossible to work with students who refuse to learn.</td>
<td>.20</td>
<td>.07</td>
<td>3.05</td>
<td>.0025</td>
</tr>
<tr>
<td>P39: I change learning assignments when students appear to be failing.</td>
<td>-.17</td>
<td>.07</td>
<td>-2.46</td>
<td>.0147</td>
</tr>
</tbody>
</table>

Note. * = Item reverse scored for negative phrasing

Last, a multiple stepwise regression identified eight of the total 60 items from the Teacher Beliefs and Teacher Practices scales as significant predictors of Career Planning. Following is a listing of these predictors:
1. Practice #53: I encourage students to think for themselves while learning.
2. Practice #44: I demonstrate to students that I care about them.
3. *Belief #14: I can't help feeling upset and inadequate when dealing with difficult students.
4. *Belief #29: I know best what students need to know and what's important; students should take my word that something will be relevant to them.
5. *Belief #21: Knowledge of the subject area is the most important part of being an effective teacher.
6. *Belief #8: It's impossible to work with students who refuse to learn.
7. *Belief #31: For effective learning to occur, I need to be in control of the direction of learning.
8. Belief #7: In order to maximize learning I need to help students feel comfortable in discussing their feelings and beliefs.

The strongest predictor, entered first in the stepwise regression procedure, was Practice #53. This item accounted for 12.14% of the total variance in Career Planning. Each subsequent step contributed additional predictive value to the model. Together, the eight items explained 24.68% of the variance. Table 32 presents the results from this regression.

Table 32
Analysis of Variance for Career Planning

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>46.62</td>
<td>8</td>
<td>5.83</td>
<td>10.98</td>
<td>.0000</td>
</tr>
<tr>
<td>Residual</td>
<td>142.24</td>
<td>268</td>
<td>.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>188.86</td>
<td>276</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Analysis of variance was significant for the prediction of Career Planning, F(8,268) = 10.98, \( p < .05 \). Eight of the 60 items that measured learner centeredness in teachers, all with \( p \) values of .0000, were found to be significant contributors to prediction of Career Planning. Table 33 presents the stepwise model parameter estimates for the eight items.

Table 33
Parameter Estimates for Prediction of Career Planning

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameter Estimate (B)</th>
<th>SE B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.05</td>
<td>.35</td>
<td>5.85</td>
<td>.0000</td>
</tr>
<tr>
<td>P#53: I encourage students to think for themselves while learning.</td>
<td>.32</td>
<td>.07</td>
<td>4.35</td>
<td>.0000</td>
</tr>
<tr>
<td>P#44: I demonstrate to students that I care about them.</td>
<td>.25</td>
<td>.07</td>
<td>3.69</td>
<td>.0003</td>
</tr>
<tr>
<td>*B#14: I can't help feeling upset and inadequate when dealing with difficult students.</td>
<td>.13</td>
<td>.05</td>
<td>2.69</td>
<td>.0076</td>
</tr>
<tr>
<td>*B29: I know best what students need to know and what's important; students should take my word that something will be relevant to them.</td>
<td>-.11</td>
<td>.06</td>
<td>-1.92</td>
<td>.0561</td>
</tr>
<tr>
<td>*B21: Knowledge of the subject area is the most important part of being an effective teacher.</td>
<td>.12</td>
<td>.05</td>
<td>2.57</td>
<td>.0107</td>
</tr>
<tr>
<td>*B8: It's impossible to work with students who refuse to learn.</td>
<td>.12</td>
<td>.05</td>
<td>2.32</td>
<td>.0214</td>
</tr>
</tbody>
</table>

(table continues)

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Table 33. (continued)

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameter Estimate (B)</th>
<th>SE B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>*B31: For effective learning to occur, I need to be in control of</td>
<td>-0.13</td>
<td>0.06</td>
<td>-2.38</td>
<td>0.020</td>
</tr>
<tr>
<td>the direction of learning.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B7: In order to maximize learning I need to help students feel</td>
<td>-0.11</td>
<td>0.05</td>
<td>-1.98</td>
<td>0.048</td>
</tr>
<tr>
<td>comfortable in discussing their feelings and beliefs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. * = Item reverse scored for negative phrasing

Question Five

The fifth question was: Is the discrepancy between teachers' and students' perceptions of teacher classroom practices related to role stress in teachers? First, a discrepancy score was obtained for each teacher by subtracting teacher mean scores from class mean scores for the scales measuring perceptions of teacher practices. Second, Pearson product-moment correlations were obtained between discrepancy and subscales of role stress. Table 34 presents the obtained correlations.

Testing revealed two low but positive statistical relationships between discrepancy and role stress. As Discrepancy increased, so did teacher stress from Role Ambiguity (.20) and Role Boundary (.17). In other words, close agreement between teachers and students regarding the learner centeredness of Teacher Practices correlated with low levels of teacher
Table 34

Correlations between Discrepancy and Role Stress

<table>
<thead>
<tr>
<th>Subscales of Role Stress</th>
<th>Discrepancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role Overload</td>
<td>.01</td>
</tr>
<tr>
<td>N</td>
<td>172</td>
</tr>
<tr>
<td>Role Insufficiency</td>
<td>.11</td>
</tr>
<tr>
<td>N</td>
<td>176</td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>.20*</td>
</tr>
<tr>
<td>N</td>
<td>176</td>
</tr>
<tr>
<td>Role Boundary</td>
<td>.17*</td>
</tr>
<tr>
<td>N</td>
<td>172</td>
</tr>
<tr>
<td>Responsibility</td>
<td>.04</td>
</tr>
<tr>
<td>N</td>
<td>174</td>
</tr>
<tr>
<td>Physical Environment</td>
<td>.07</td>
</tr>
<tr>
<td>N</td>
<td>172</td>
</tr>
</tbody>
</table>

Note. * = p < .05

stress due to Role Ambiguity and Role Boundary. It appears that whether teachers are learner centered or not, they may be slightly less stressed if their students agree with them.

Question Six

The sixth question was: Is the discrepancy between teachers' and students' perceptions of teacher classroom practices predictive of role stress in teachers? Testing with multiple regression determined whether Discrepancy, which correlated positively with both Role Boundary and Role Ambiguity, could explain the variance in either of these two subscales of role stress.
Discrepancy accounted for 2.99% of the total variance in Role Boundary. Table 35 presents the results from this regression.

Table 35
Analysis of Variance for Role Boundary

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2.42</td>
<td>1</td>
<td>2.42</td>
<td>5.24</td>
<td>.0233</td>
</tr>
<tr>
<td>Residual</td>
<td>78.43</td>
<td>170</td>
<td>.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>80.85</td>
<td>171</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Analysis of variance was significant for the prediction of Role Boundary, $F(1, 170) = 5.24, p < .05$. Table 36 presents the parameter estimates for Discrepancy.

Table 36
Parameter Estimates for Prediction of Role Boundary

<table>
<thead>
<tr>
<th>Variable</th>
<th>Parameter Estimate (B)</th>
<th>SE B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.12</td>
<td>.07</td>
<td>29.20</td>
<td>.0000</td>
</tr>
<tr>
<td>Discrepancy</td>
<td>.22</td>
<td>.09</td>
<td>2.29</td>
<td>.0233</td>
</tr>
</tbody>
</table>

Discrepancy accounted for 4.00% of the total variance in Role Ambiguity. Table 37 presents the results from this regression.
Table 37

Analysis of Variance for Role Ambiguity

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2.84</td>
<td>1</td>
<td>2.84</td>
<td>7.24</td>
<td>.0078</td>
</tr>
<tr>
<td>Residual</td>
<td>68.23</td>
<td>174</td>
<td>.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>71.07</td>
<td>175</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Analysis of variance was significant for the prediction of Role Ambiguity, $F(1, 174) = 7.24$, $p < .05$. Table 38 presents the parameter estimates for Discrepancy.

Table 38

Parameter Estimates for Prediction of Role Ambiguity

<table>
<thead>
<tr>
<th>Variable</th>
<th>Parameter Estimate (B)</th>
<th>SE B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.06</td>
<td>.07</td>
<td>30.93</td>
<td>.0000</td>
</tr>
<tr>
<td>Discrepancy</td>
<td>.24</td>
<td>.09</td>
<td>2.69</td>
<td>.0078</td>
</tr>
</tbody>
</table>

Question Seven

The seventh question was: Is the discrepancy between teachers' and students' perceptions of teacher classroom practices related to career commitment in teachers? Pearson product-moment correlations were obtained between discrepancy and subscales of career commitment. Table 39 presents the obtained correlations.
Testing revealed two statistically significant relationships between Discrepancy and subscales of career commitment. The first relationship (-.17) was low but negative: As Discrepancy increased, Career Identity tended to decrease slightly. A moderate but negative relationship (-.33) existed between Discrepancy and Career Planning: As Discrepancy increased, Career Planning decreased. In other words, teachers’ ability to understand their career goals and plan accordingly tended to decrease as students’ disagreement with them about the learner centeredness of their classroom practices increased. It appears that whether teachers are learner centered or not, they may experience more career commitment if their students agree with them.

**Question Eight**

The eighth question was: Is the discrepancy between teachers’ and students’ perceptions of teacher classroom practices predictive of career commitment in teachers? Testing with multiple regression determined whether Discrepancy, which correlates negatively with both Career Identity
and Career Planning, can explain the variance in either of these two subscales of career commitment. Table 40 presents the results from this regression.

Table 40

**Analysis of Variance for Career Identity**

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2.97</td>
<td>1</td>
<td>2.97</td>
<td>5.23</td>
<td>.0234</td>
</tr>
<tr>
<td>Residual</td>
<td>98.91</td>
<td>174</td>
<td>.57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>101.88</td>
<td>175</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Discrepancy accounted for 2.92% of the variance in Career Identity.

Analysis of variance was significant for the prediction of Career Identity, $F(1, 174) = 5.23, p < .05$. Table 41 presents the parameter estimates for Discrepancy.

Table 41

**Parameter Estimates for Prediction of Career Identity**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Parameter Estimate (B)</th>
<th>SE B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.16</td>
<td>.08</td>
<td>51.59</td>
<td>.0000</td>
</tr>
<tr>
<td>Discrepancy</td>
<td>-0.24</td>
<td>.11</td>
<td>-2.29</td>
<td>.0234</td>
</tr>
</tbody>
</table>
Discrepancy accounted for 10.84% of the variance in Career Planning.

Table 42 presents the results from this regression.

Table 42
Analysis of Variance for Career Planning

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>14.66</td>
<td>1</td>
<td>14.66</td>
<td>21.39</td>
<td>.0000</td>
</tr>
<tr>
<td>Residual</td>
<td>120.59</td>
<td>176</td>
<td>.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>135.25</td>
<td>177</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Analysis of variance was significant for the prediction of Career Planning, F(1, 176) = 21.39, p < .05. Table 43 presents the parameter estimates for Discrepancy.

Table 43
Parameter Estimates for Prediction of Career Planning

<table>
<thead>
<tr>
<th>Variable</th>
<th>Parameter Estimate (B)</th>
<th>SE B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.77</td>
<td>.09</td>
<td>43.08</td>
<td>.0000</td>
</tr>
<tr>
<td>Discrepancy</td>
<td>- .53</td>
<td>.11</td>
<td>-4.63</td>
<td>.0000</td>
</tr>
</tbody>
</table>

Combining the predictive influence of Discrepancy, Teacher Beliefs, and Teacher Practices allows for a more complete accounting of the variance...
in Role Boundary, Role Ambiguity, Career Identification, and Career Planning. Table 44 presents these combined influences.

Table 44

**Combined Influence of Learner Centeredness and Discrepancy on Role Stress and Career Commitment**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Role Boundary P</th>
<th>Role Ambiguity P</th>
<th>Career Identity P</th>
<th>Career Planning P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Beliefs/Practices</td>
<td>21.59</td>
<td>20.96</td>
<td>24.91</td>
<td>24.68</td>
</tr>
<tr>
<td>Discrepancy</td>
<td>2.99</td>
<td>4.00</td>
<td>2.92</td>
<td>10.84</td>
</tr>
<tr>
<td>Total Predictive Influence</td>
<td>24.58</td>
<td>24.96</td>
<td>27.83</td>
<td>35.52</td>
</tr>
</tbody>
</table>

An independent t-test confirmed significant differences between demographic subgroups for two variables. First, males and females differed in their self-perceptions of teacher beliefs. Females (M = 2.59, SD = .25) reported more learner-centered beliefs than did males (M = 2.50, SD = .30), t(145.82) = 2.43, p < .05. Second, teachers who claimed that they would go into teaching again if starting over (M = 3.25, SD = .45) reported more learner-centered practices than those who said they would not choose again to teach (M = 3.08, SD = .53), t(160.28) = 2.56, p < .05. No significant differences were found for any other demographic subgroups in the sample.
Summary of Results

This chapter first reviewed the research design of the study. Next, the findings were presented and analyzed, including (a) a description of the sample based on demographic data, and (b) test results related to each of the eight research questions.

Pearson product-moment correlations were computed to determine if relationships existed and their strengths. Linear and multiple stepwise regression tests were used to determine if the variance of any of the subscales of role stress and/or career commitment could be explained by items measuring teacher beliefs, teacher practices, or discrepancy.

A total of 16 significant relationships were identified through correlational analysis, with strengths of those relationships ranging from low to moderate. In addition, testing indicated that learner centeredness and discrepancy did help explain variance in role stress and career commitment. Table 45 summarizes these findings.
Table 45

Summary of Research Findings

<table>
<thead>
<tr>
<th>Variable</th>
<th>Teacher Beliefs</th>
<th>Teacher Practices</th>
<th>Discr.*</th>
<th>Combined Predictive Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role Insufficiency</td>
<td>-.27</td>
<td>-.31</td>
<td>-</td>
<td>Five items explained 19.32% of variance.</td>
</tr>
<tr>
<td>Role Boundary</td>
<td>-.19</td>
<td>-.25</td>
<td>.17</td>
<td>Six items (21.59%) plus Discrepancy (2.99%) explained 24.58% of variance.</td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>-.16</td>
<td>-.32</td>
<td>.20</td>
<td>Five items (20.96%) plus Discrepancy (4.00%) explained 24.96% of variance.</td>
</tr>
<tr>
<td>Career Identity</td>
<td>.28</td>
<td>.32</td>
<td>-.17</td>
<td>Seven items (24.91%) plus Discrepancy (2.92%) explained 27.83% of variance</td>
</tr>
<tr>
<td>Career Resilience</td>
<td>.30</td>
<td>.15</td>
<td>-</td>
<td>Six items explained 25.36% of variance</td>
</tr>
<tr>
<td>Career Planning</td>
<td>.12</td>
<td>.36</td>
<td>-.33</td>
<td>Eight items (24.68%) plus Discrepancy (10.84%) explained 35.52% of variance</td>
</tr>
</tbody>
</table>

Note. Discr.* = Discrepancy

Chapter five presents a summary of the research study, conclusions about findings, and recommendations.
CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The focus of chapter five is threefold. First, the chapter presents a brief summary of the problem, methodology, limitations, and findings of the study. Second, the study's conclusions are discussed. Finally, the chapter presents recommendations for further research and tentative implications for practice.

Summary

Herein lies the problem: This nation is facing a shortage of teachers at a time when major educational reforms, including a shift toward more learner-centered classroom systems, depend upon teachers who are highly qualified, energized, and professionally committed. The U.S. Department of Education (Bradley, 1999) estimates that schools will need two million additional teachers to fill classrooms in the next decade. An uneven teacher supply across the nation complicates the issue. Florida's staffing needs reflect the national trend, with a particularly "strong demand for all areas of special education" (p. 11). Increasing levels of role stress and decreasing career commitment in teachers interferes with the maintenance of a strong teaching force and is problematic for the profession.

How can we best ensure a committed, qualified, and energized teaching force for the twenty-first century? This concern drove this study's examination of one of the significant national reform movements in education, the shift toward learner-centeredness, and its relationship to
both role stress and career commitment in teachers. Eight research questions framed the study:

1. Is there a relationship between learner centeredness and role stress in teachers?
2. Is learner centeredness predictive of role stress in teachers?
3. Is there a relationship between learner centeredness and career commitment in teachers?
4. Is learner centeredness predictive of career commitment in teachers?
5. Is the discrepancy between teachers' and students' perceptions of teacher classroom practices related to role stress in teachers?
6. Is the discrepancy between teachers' and students' perceptions of teacher classroom practices predictive of role stress in teachers?
7. Is the discrepancy between teachers' and students' perceptions of teacher classroom practices related to career commitment in teachers?
8. Is the discrepancy between teachers' and students' perceptions of teacher classroom practices predictive of career commitment in teachers?

Answers to these research questions have the potential to add to the knowledge educational leaders need in their ongoing search to find effective ways to retain our nation's most effective teachers.

Three hundred eighteen teachers from eight schools in three northeast Florida counties participated in the study. They completed four surveys: (a) parts one and two of the Learner-Centered Battery - Teacher Version: Grades 6 - 12 (McCombs, Lauer, & Peralez, 1997), (b) the Occupational Roles Questionnaire (Osipow & Spokane, 1987), (c) the Career Commitment Measure (Carson & Bedeian, 1994), and (d) a demographic
survey adapted from part six of the Learner-Centered Battery - Teacher Version: grades 6-12. Eleven variables were measured:

1. teacher beliefs about learners and learning;
2. teacher self-perceptions of classroom practices;
3. role overload (job demands exceed personal and workplace resources);
4. role insufficiency (individual's training, skills, education, and experience are insufficient to meet job requirements);
5. role ambiguity (expectations, evaluation criteria, and priorities are unclear to the individual);
6. role boundary (individual is experiencing conflicting role demands and loyalties in the work setting);
7. responsibility (individual feels a great deal of responsibility for the performance and welfare of others on the job);
8. physical environment (individual is exposed to high levels of environmental toxins or extreme physical conditions);
9. career identity (emotional attachment to teaching);
10. career resilience (perseverance through difficulties); and
11. career planning (understanding career needs and establishing career goals accordingly).

In addition to completing the surveys, 60 percent of the teachers (N=192) had a class anonymously complete part one of the Learner-Centered Battery - Student Version (McCombs, Lauer, & Peralez, 1997). A total of 4,539 students were willing to complete the survey. The 25 items in this scale matched those in part two of the Learner-Centered Battery - Teacher Version (McCombs, Lauer, & Peralez, 1997), but were from students' rather than teachers' perspectives. The difference (student minus teacher mean
scores) between these two scales was computed to obtain the discrepancy score needed to examine research questions five through eight.

Discussion of Limitations

Consideration of external validity raised concern regarding the generalizability of findings to teachers beyond the sample. Both the size of the sample and the design for data collection reflected efforts to minimize this concern. The sample consisted of 10.2 percent of the middle school teachers in the tri-county area were sampled.

Attention was also given to possible threats to internal validity. According to McMillan and Schumacher (1993), "the internal validity of a study is a judgment that is made concerning the confidence with which plausible rival hypotheses can be ruled out as explanations for the results" (p. 300). To this end, several threats were addressed. First, all data were collected within a nine-week time period to reduce the risk that extraneous incidents across time would affect results. Second, the sample was drawn in such a way that most teachers chose to participate. Hopefully this approach minimized the limitation of having a nonrandom sample. Third, care was taken to control subject effects by giving consistent directions, both in style and content, to participating teachers across all eight sites. Fourth, the results of Cronbach alpha testing of the instruments used with the study's sample were consistent with those obtained during norming of the instruments. Finally, the threat of subject attrition was minimized by making sure that participants were not overwhelmed by the length and demands of the data-gathering process. For this reason, there was no qualitative component to the study. Follow-up research efforts could focus on qualitative questions to extend findings.
Conclusions

This section draws conclusions from the findings presented in chapter four and relates the conclusions to those in the review of literature. The discussion is organized according to pairs of research questions. Questions one and two addressed the relationship between learner centeredness and role stress. Questions three and four treated the relationship between learner centeredness and career commitment. Questions five and six examined the relationship between discrepancy and role stress, and questions seven and eight addressed the relationship between discrepancy and career commitment. The study's conclusions led to the recommendations in the last section of this chapter.

Questions One and Two

Questions one and two were, respectively: (a) is there a relationship between learner centeredness and role stress in teachers, and (b) is learner centeredness predictive of role stress in teachers? Pearson product-moment correlations were computed to investigate the relationship between learner centeredness and role stress in teachers (question one), and if learner centeredness was predictive of role stress (question two.)

Findings from Pearson product-moment correlations indicated six inverse relationships between learner centeredness and role stress. First, as teacher beliefs about learners and learning became more positive, negative stress deriving from role insufficiency, role boundary, and role ambiguity decreased. Second, as classroom practices became more learner centered, stress deriving from the same three sources, role insufficiency, role boundary, and role ambiguity, tended to decrease. These findings do not suggest causation, but rather a predictable pattern of co-variation. The strengths of the relationships ranged from low to moderate.
It is interesting to note that, taken together, the types of negative stress that less learner-centered teachers reported seem to be characterized by a common element of "uncertainty." These teachers' responses reflected uncertainty about whether they felt adequately prepared to teach (role insufficiency), uncertainty about what their priorities should be and how to meet the evaluative expectations of their jobs as teachers (role ambiguity), and uncertainty about how to juggle the demands of the job (role boundary). The sources of stress that did not relate to teacher beliefs lack this element of uncertainty, instead reflecting an "excessive" element: job demands beyond a teacher's resources, enormous responsibility for others' performance and welfare, and extreme environmental conditions, such as room temperatures that are too high for comfort.

It would be premature to conclude that more learner-centered teachers experience less uncertainty in their roles. Another possibility is that learner-centered teachers face the same uncertainties as nonlearner-centered teachers, but that uncertainty creates eustress in learner-centered teachers, thereby serving a positive function in their teaching lives.

Multiple stepwise regression determined that some beliefs and practices were, in fact, predictive of role stress. Three nonlearner-centered beliefs predicted high role stress:

- No matter what I do or how hard I try, there are some students that are unreachable.
- I can't help feeling upset and inadequate when dealing with difficult students.
- I am responsible for what students learn and how they learn.

In addition, three learner-centered beliefs contributed to low role stress:
• Seeing things from the students' point of view is the key to their good performance in school.

• My acceptance of myself as a person is more central to my classroom effectiveness than the comprehensiveness of my teaching skills.

• Students will be more motivated to learn if teachers get to know them at a personal level.

The learner-centered practice predicting low role stress from the greatest number of sources (role insufficiency, role ambiguity, and role boundary) was: I ask students to listen to and think about their classmates' opinions, even when they don't agree with them. Three other learner-centered practices also contributed to low role stress:

• I demonstrate to students that I care about them.

• I appreciate my students for who they are beyond whatever their accomplishments might be.

• I help students feel like they belong in the class.

Expectedly, these practices are consistent with the learner-centered beliefs identified above. They reflect the importance of teacher-student relationships in the teaching process. Teachers willing and able to establish nurturing relationships with their students contribute to their own lower role stress and higher career commitment than teachers who are nonlearner centered. The encouraging insight offered by these findings is that teachers do have control over at least some of the role stress they experience since it is, in part, a function of their own belief and practice systems.

Findings by other researchers offer insights that relate to the findings and conclusions of this study. Seyle (1956) defined coping behaviors as the ways people attempt to restore equilibrium in their lives. When successful, they experience eustress rather than distress. In this context, developing
learner-centered beliefs and practices could perhaps serve as coping behaviors for teachers as they work towards smooth-running classroom systems. Perhaps they experience more eustress than distress as they realize the positive outcomes associated with learner centeredness (Lambert & McCombs, 1998). As Osipow and Spokane (1984) suggested, these teachers may be motivated by their eustress to perform at even more effective levels.

We can look to previous researchers for possible explanations of the amount of role stress not accounted for by learner centeredness. Several predictors derive from the social environment of the school. Ray (1991) found that a high frequency of communication (link strength) with colleagues could lower role stress. Hock (1988) found that feelings of being trapped, class discipline problems, lack of administrative support for work and personal problems, and isolation from colleagues predicted burnout. It should be noted here that, in the ever-interactive nature of open systems, some predictors, such as class discipline problems, may be considered an outcome of a nonlearner-centered approach. However, discipline problems circulate through the parts of the classroom system, becoming not only an outcome but also a subsequent input to the classroom process. Stamaman and Miller (1992) found, like Hock, that administrative support was key to preventing burnout. In addition, they established that strong support from peers in the form of listening, concern, trust, and advice was predictive of lower stress.

Other predictors of role stress in teachers have been established through numerous demographic studies. Age, locus of control, race, ethnic similarities between teachers and students, years of experience, tenure, income independence, perception of principal role, experience with racial
discrimination, support for the Singleton Ratio, salary, role status and recognition, and workload are all factors that impact teacher stress (Dworkin, 1987; Friesen, 1988; Litt & Turk, 1985; Starnaman & Miller, 1992). The amount of stress not accounted for by learner centeredness is likely to be explained by a combination of these demographic and social/organizational factors in the lives of teachers. The combined findings of previous research and this study illustrate the complexity of the problem of role stress in teachers.

**Questions Three and Four**

Questions three and four were, respectively: (a) Is there a relationship between learner centeredness and career commitment in teachers? and (b) Is learner centeredness predictive of career commitment in teachers? Pearson product-moment correlations established six low to moderate, but positive, relationships. First, teachers whose beliefs were more learner centered were more likely to experience higher levels of career identity, career resilience, and career planning than teachers who were less learner centered. Likewise, teachers whose practices were more learner centered were more likely to report higher levels of career identity, career resilience, and career planning than less learner-centered teachers.

These findings suggest that there may be a segment of the teaching force that, being more learner centered, maintains a high level of emotional attachment to teaching (career identity) even when the job becomes difficult (career resilience). In addition, these same teachers may have a good understanding of their career needs and establish career goals accordingly (career planning).
Multiple stepwise regression determined that some beliefs and practices are, in fact, predictive of career commitment. Three learner-centered beliefs contributed to high commitment:

- Students have more respect for instructors they see and can relate to as real people, not just as teachers.
- In order to maximize learning, I need to help students feel comfortable in discussing their feelings and beliefs.
- Seeing things from the students' point of view is the key to their good performance in schools.

In contrast, nine nonlearner-centered beliefs contributed to low commitment:

- Too many students expect to be coddled in school.
- It's impossible to work with students who refuse to learn.
- It's just too late to help some students.
- Good teachers always know more than their students.
- My most important job as a teacher is to help students meet well-established standards of what it takes to succeed.
- I can't help feeling upset and inadequate when dealing with difficult students.
- I know best what students need to know and what's important; students should take my word that something will be relevant to them.
- Knowledge of the subject area is the most important part of being an effective teacher.
- For effective learning to occur, I need to be in control of the direction of learning.
In addition to establishing the predictive value of learner-centered beliefs for career commitment, multiple regression also determined that five learner-centered practices contributed to high career commitment in teachers:

- I allow students to express their own unique thoughts and beliefs.
- I change learning assignments when students appear to be failing.
- I teach students how to deal with stress that affects their learning.
- I encourage students to think for themselves while learning.
- I demonstrate to students that I care about them.

The last practice listed above had predictive influence for all three dimensions of career commitment, suggesting the critical nature of caring in highly committed teachers. These findings offer evidence that teachers can strengthen their own career commitment by developing beliefs and practices that focus on meeting the needs of learners and are consistent with the learner-centered principles presented in chapter two.

Further examination of the results from the first four questions revealed that seven learner-centered items helped explain more than one subscale of role stress and/or career commitment. Table 46 shows these items and the subscales they predict.
Table 46

Learner-Centered Items that Explain More than One Subscale of Role Stress and/or Career Commitment

<table>
<thead>
<tr>
<th>Item</th>
<th>RI</th>
<th>RA</th>
<th>RB</th>
<th>CI</th>
<th>CR</th>
<th>CP</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>B8:</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>It's impossible to work with students who refuse to learn.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B14:</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>I can't help feeling upset and inadequate when dealing with difficult students.</td>
<td></td>
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<tr>
<td>B33:</td>
<td>X</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>I am responsible for what students learn and how they learn.</td>
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<tr>
<td>P44:</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>4</td>
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<tr>
<td></td>
<td>I demonstrate to students that I care about them.</td>
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<tr>
<td>P53:</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
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<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>I encourage students to think for themselves while learning.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>P56:</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
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<td>2</td>
</tr>
<tr>
<td></td>
<td>I help students feel like they belong in the class.</td>
<td></td>
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<td></td>
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<tr>
<td>P57:</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>I ask students to listen to and think about their classmates' opinions, even when they don't agree with them.</td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

Note. *=Items are reversed scored for negative phrasing. RI = Role Insufficiency, RA = Role Ambiguity, RB = Role Boundary, CI = Career Identity, CR = Career Resilience, CP = Career Planning

One item (P44) influenced four subscales. This item, showing caring for students, is a learner-centered practice. Its influence across several subscales suggests that showing one's caring for students plays an important role in shaping teachers' overall stress and commitment. Asking students to care about one another's opinions (P57) predicted three
dimensions of role stress. Again, it appears that caring is a critical feature of how teachers experience stress on the job. Although the remaining three items have less range of influence, they also seem to be key in predicting teachers' stress and commitment.

As an extension of the first and third research questions, Pearson product-moment correlations confirmed the inverse relationship widely established in the literature between role stress and career commitment (Blase & Kirby, 1992; Firestone & Rosenblum, 1988; Rosenholtz, 1987, 1989; White, 1992). Figure 7 presents the strengths of the relationships found to be significant in this study.

Of the 13 statistically significant, inverse relationships between role stress and career commitment, seven were low to moderate in strength (-.25 through -.38. Thus, as stresses due to Role Overload, Role Boundary, Responsibility, and Role Insufficiency increased, Career Resilience decreased. As stresses due to Role Boundary or Role Insufficiency increased, Career Identity decreased. Finally, as stresses due to Role Boundary increased, Career Planning decreased. Role Boundary as a source of stress co-varied with all three subscales of career commitment.

Six low, inverse relationships (-.17 through -.22) related subscales of role stress and career commitment. Thus, as stresses due to Physical Environment and Role Ambiguity increased, Career Resilience tended to decrease. As Role Ambiguity increased, Career Identity tended to decrease. Finally, as Role Ambiguity, Responsibility, and Role Insufficiency increased, Career Planning tended to decrease.
Figure 7. Significant relationships among subscales of role stress and career commitment
Previous research offers several explanations for career commitment that likely account for the amount of commitment not predicted by learner centeredness. Rosenholtz (1989) found that work conditions predicted commitment. Other researchers agreed, identifying several types of conditions that explain commitment, including time to meet daily work demands, a sense of control, autonomy, collaboration, sharing in decisions, meaningful feedback from administrators, opportunities for learning, psychic rewards, school climate, perceived stress, and fair differential incentives (Blase & Kirby, 1992; Carnegie Foundation, 1990; Dworkin, 1987; Firestone & Pennell (1993); Firestone and Rosenblum, 1988; Louis, 1991; Miller, Brownell, & Smith, 1999; Rosenholtz, 1991).

Hart (1990) concluded that differences in teachers moderated the effects of work conditions on commitment. This conclusion is consistent with this study's findings in that learner-centered teachers and nonlearner-centered teachers reported significant differences in their levels of career commitment.

Rosenholtz and Simpson (1990) concluded from their research on career stages (novice, mid-career, and veteran) that teachers in different stages need different types of professional support. It would be interesting to extend this exploration to determine whether learner centeredness correlates with these stages and moderates the types of support necessary at any given stage.

Previous research also offers several demographic variables as contributors to the prediction of career commitment. Age, race, certification status, salary, years of experience, financial independence, and grade level all contribute to career commitment (Bobbitt, Faupel, & Burns, 1991; Dworkin, 1987; Heyns, 1988; Miller, Brownell, & Smith, 1999). It is clear
from the combination of findings from previous research and this study that commitment to remain in teaching is impacted by a complex array of variables. As with efforts to solve the problem of teacher burnout, caution must be taken to avoid the prescription of a simplistic antidote to teacher defection from the classroom.

**Questions Five and Six**

Questions five and six were, respectively: (a) Is the discrepancy between teachers’ and students’ perceptions of teacher classroom practices related to role stress in teachers? and (b) Is the discrepancy between teachers’ and students’ perceptions of teacher classroom practices predictive of role stress in teachers? Pearson product-moment correlations established two positive but low relationships. As discrepancy increased, so did teacher stress due to role ambiguity and role boundary issues. In other words, when teachers and their students disagree over the learner centeredness of teacher practices, teachers may experience uncertainty about their own role expectations and priorities as teachers. They may also experience conflicting role demands. Thus, the interplay of teacher and student perceptions in the classroom system may play a slight part in teacher role stress. This conclusion is consistent with the concept that each part of an open system leads to adjustments in other parts through feedback.

Multiple regression determined that discrepancy had a significant but almost negligible value for predicting role stress. Discrepancy explained only 3% of the variance of stress from role boundary issues and 4% from role ambiguity issues. This finding supports Gold and Roth’s (1993) contention that burnout is perceptually based. Teachers’ self-perceptions of learner centeredness appear to be much more crucial to their experience of stress than whether their students assess their learner centeredness the same
way. It is unlikely, in fact, that an external reality of learner centeredness actually exists, since students, like teachers, report through their own perceptual filters.

Although discrepancy by itself contributes very little to the explanation of role stress, the combination of teacher beliefs, teacher practices, and discrepancy offers teachers a modest amount of control over their own role stress. Increasing their control in this manner can perhaps serve as a coping mechanism for teachers. This conclusion is consistent with findings by other researchers that having ways to cope and gain a sense of control leads to lower stress (Osipow & Spokane, 1984; Seyle, 1956).

**Questions Seven and Eight**

Questions seven and eight were, respectively: (a) Is the discrepancy between teachers' and students' perceptions of teacher classroom practices related to career commitment in teachers? and (b) Is the discrepancy between teachers' and students' perceptions of teacher classroom practices predictive of career commitment in teachers? Pearson product-moment correlations established two significant relationships. The first relationship was negative but low: As discrepancy increased, career identity tended to decline. The second relationship was negative but moderate: As discrepancy increased, career planning decreased. In other words, when teachers and their students disagree over the learner centeredness of teacher practices, teachers may experience a slight decline in emotional attachment to teaching. They may also experience a moderate decline in their ability to set and pursue goals within the teaching profession. As with role stress, the interplay of teacher and student perceptions of teacher practices actually may play a small part in teachers' career commitment.
Multiple regression determined that discrepancy had a significant but slight value for predicting career commitment. Discrepancy explained only 3% of the variance of career identity and 11% of career planning. However, combining the influences of teacher beliefs, practices, and discrepancy allowed for prediction of 28% of career identity and 36% of career planning. To the extent that teachers can control their own beliefs, practices, and the discrepancy between how they and their students perceive their practices, they may also be able to control some of their own career commitment. The importance of this conclusion is that the existing literature base, in presenting career commitment as a function of conditions external to the teacher (Firestone & Rosenblum, 1988; Fullan, 1992; Rosenholz & Simpson, 1990; White, 1992), may be presenting only part of the picture. This study supports the premise that teachers themselves orchestrate at least some of their own career commitment to a significant extent through the learner centeredness of their beliefs and practices.

The model of the classroom system can now be revised to reflect the conclusions of the study. Figure 8 presents the two dimensions of learner centeredness, Teacher Beliefs and Teacher Practices, as contributors to six specific dimensions of role stress and career commitment: Role Insufficiency, Role Boundary, Role Ambiguity, Career Identity, Career Resilience, and Career Planning. Discrepancy also adds influence to Role Boundary, Role Ambiguity, Career Identity, and Career Planning.
Figure 8. Influence of learner centeredness on role stress and career commitment within the classroom system.
Interdependence is an essential feature of open systems (Thompson, 1996). Shifting particular beliefs and practices in a more learner-centered direction may decrease role stress and increase commitment to teaching. It may also, by design, support a more positive cycling of outputs, inputs, and throughputs. Looking at the larger picture of the classroom system, it seems a reasonable conclusion to regard increasing learner centeredness as a partial antidote to teacher burnout and attrition.

Recommendations

The conclusions from this study lead us to consider recommendations for practice and raise additional questions worthy of study. Implications for practice are very tentative, given the complexity of the issues relating learner centeredness, teacher stress, and commitment. It appears that teachers, administrators, school systems, and teacher education programs could continuously assess their philosophies, beliefs, and practices with the goal of aligning them with the learner-centered principles established by the research community.

Recommendations by advocates for learner-centered classrooms and schools have previously been made without the benefit of knowing how this reform effort impacts teachers. According to McCombs and Lauer (1997), teachers need to become more reflective and learner centered. Universities need to bridge the gap in teacher preparation between pre- and in-service teachers by meeting individual professional development needs. Finally, those who promote "best practice" need to consider the diversity of the teaching force and its implications for what it means to be effective. Conclusions from this study support these recommendations.

In spite of the hopeful nature of this study's findings, it would be presumptuous to assume that adoption of learner centeredness would
completely eliminate the problems of teacher role stress and career commitment. There is no simple or unidimensional solution to the complex problem of maintaining a resilient teaching force. For this reason, it is important that we continue asking questions that will lead to a more complete understanding of how best to support expertise and commitment in our teachers. According to Bradley (1996), this initiative is already underway and is being led by those with educational vision:

The report, "A Nation Prepared: Teachers for the 21st Century," called for the establishment of the National Board for Professional Teaching Standards and sought changes in schools that would make teaching a more attractive job....After all, high standards for students cannot be met without highly skilled teachers. (p. 196)

Several questions for further study derive from the findings and conclusions of this study. These questions fit within the larger research agenda on education by refining our understanding of teachers. Quantitative, qualitative, and longitudinal research designs would enrich the scope and depth of information available to pursue the following lines of inquiry:

- What is the nature of eustress in teachers? How does it develop? What predicts its development and maintenance? What are its outcomes?
- Do adults preparing to be teachers, who are nonlearner centered in their beliefs about learners and learning, change their beliefs during teacher preparation programs designed to prepare learner-centered teachers?
- How do those entering teacher preparation programs perceive the role of teacher in the 21st century? What assumptions underlie these perceptions in teacher preparation students?
• Is there a relationship between type of school governance and learner centeredness in teachers? Are there features of school-based reform that predict learner centeredness in teachers?

• Given evidence from this study that learner-centered teachers are actively goal-setting for their careers, what kinds of goals they are setting? Are their goals taking them to new roles within the profession, or out of the educational field altogether?

• Are the philosophies, beliefs, and practices that structure teacher education programs aligned with the learner-centered principles identified by the Mid-continent Regional Educational Laboratory (Lambert & McCombs, 1998)? To what extent would an alignment increase effectiveness of teacher education programs?

• What is the nature of professional resilience in teachers? How does it develop? What predicts its development and maintenance? What are its outcomes?

• In what ways do male and female teachers differ in their belief systems related to learners and learning?

• How are self-perceptions of teacher classroom practices different between teachers who would choose to go into teaching again and those who would not, given what they now know?

On a more speculative level, further research could illuminate other relationships in the classroom system. For instance, are learner-centered teachers more important to marginal students than strong students for gains in academic achievement and motivation to learn? Worded differently, do strong students learn well in spite of mediocre or poor teachers? Do teachers who choose to work with marginal students require different or the same supports as teachers who work with strong and gifted students? How
does school climate interact with the development of learner centeredness in teachers and the responsiveness of students? Do the cultural and ethnic backgrounds of students influence their preference for learner-centered or nonlearner-centered teachers?

Learner centeredness has gained momentum in the United States at a time when educational reform initiatives are making great demands on teachers. Darling-Hammond and Sclan (1996) contrasted the current expectations of teachers with those of years past:

These initiatives have in common a view of teaching as complex, grounded in decisions that are contingent on students' needs and instructional goals, and reciprocal, that is, continually shaped and reshaped by students' responses to learning events. This view contradicts with that of the recent "technicist" era of teacher training and evaluation in which teaching was seen as the implementation of set routines and formulas for behavior that were standardized and disconnected from the diverse needs and responses of students. (p. 68)

We cannot ignore such a major shift in expectations for our teachers. The resulting pressures are being seen in increased teacher stress and attrition. The promising insights gained through this study offer hope that teachers themselves can begin to turn the tide on burnout and teacher shortages.
APPENDIX A

Instrumentation: Grouping of Items under Variables

*Learner-Centered Battery - Teacher Version: Grades 6-12*
(McCombs, Lauer, & Peralez, 1997)

1. Teacher Beliefs
   - Learner-centered beliefs about learners, learning, and teaching
     14 Items: 1, 4, 7, 10, 13, 16, 18, 22, 25, 28, 30, 32, 34, 35
   - Nonlearner-centered beliefs about learners
     9 Items: 2, 5, 8, 11, 14, 17, 20, 23, 26
   - Nonlearner-centered beliefs about learning and teaching
     12 Items: 3, 6, 9, 12, 15, 18, 21, 24, 27, 29, 31, 33

2. Teacher Perceptions of Classroom Practices
   - Creates positive interpersonal relationships
     7 Items: 36, 40, 44, 48, 52, 56, 59
   - Honors student voice, provides challenge, and encourages perspective taking
     7 Items: 37, 41, 45, 49, 53, 57, 60
   - Encourages higher-order thinking and self-regulation
     6 Items: 38, 42, 46, 50, 54, 58
   - Adapts to individual developmental differences
     5 Items: 39, 43, 47, 51, 55
3. Student Perceptions of the Teacher’s Classroom Practices

- Creates positive interpersonal relationships
  7 Items: 1, 5, 9, 13, 17, 21, 24

- Honors student voice, provides challenge, and encourages perspective taking
  7 Items: 2, 6, 10, 14, 18, 22, 25

- Encourages higher-order thinking and self-regulation
  6 Items: 3, 7, 11, 15, 19, 23

- Adapts to individual developmental differences
  5 Items: 4, 8, 12, 16, 20

4. Discrepancy between Teacher and Student Perceptions of the Teacher’s Classroom Practices

- Subtract means for teacher perceptions (Variable 2: Items 36-60) from means for student perceptions (Variable 3: Items 1-25)
Occupational Roles Questionnaire
(Osipow & Spokane, 1987)

1. Role Overload 10 Items: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
2. Role Insufficiency 10 Items: 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
3. Role Ambiguity 10 Items: 21, 22, 23, 24, 25, 26, 27, 28, 29, 30
4. Role Boundary 10 Items: 31, 32, 33, 34, 35, 36, 37, 38, 39, 40
5. Role Responsibility 10 Items: 41, 42, 43, 44, 45, 46, 47, 48, 49, 50
6. Physical Environment 10 Items: 51, 52, 53, 54, 55, 56, 57, 58, 59, 60

Career Commitment Measure
(Carson & Bedelan, 1994)

1. Career Identity 3 Items: 1, 2, 3
2. Career Planning 3 Items: 4, 5, 6
3. Career Resilience 3 Items: 7, 8, 9
Dear Principal:

My dissertation is a study of how best practice, teacher stress, and commitment are related. This study is important to teachers in at least two ways:

- Teachers can help inform the profession about the stresses today's teachers are experiencing as they attempt to implement educational reform. The results will offer implications for supporting best practice, low stress, and long-term commitment in teachers.

- The feedback teachers receive from this session will offer insight into their own role stresses and the extent to which they use "best practice." I hope this type of reflection will influence teachers to utilize the resources available to them to continuously improve their practice and manage stresses in positive ways.

To implement my study, I need to be able to talk with your teachers in a large group and invite them to complete, right then, three surveys: the Learner-Centered Battery, the Occupational Role Questionnaire, and the Career Commitment Measure. All instruments are coded so confidentiality of teachers is assured. The entire process will take approximately 30 minutes.

The purpose of asking the entire faculty to participate is to obtain a representative sample of teachers. I am hoping that, with your endorsement and my introductory comments, teachers will be willing to volunteer to help.

One section of the Learner-Centered Battery is set up for teachers to have one class anonymously give them feedback about their teaching practices. The short checklist contains the types of questions any good teacher would informally ask students from time to time to help improve their practice. No class or students will be...
identified, no information will be gathered about the students themselves, and no conclusions will be drawn about students.

The Institutional Review Board at the University of North Florida has approved the design of my dissertation, concluding that it meets required ethical standards and offers no professional, psychological, or other personal risks to those involved in the study.

May I use your faculty for my study? If so, we need to schedule a time that is workable for you. At the session, I will introduce the study to your entire faculty, invite them to participate, obtain written consent, and administer the surveys.

I thank you for considering my request. Having been in teaching for many years, I have a keen and respectful appreciation for how valuable time is to both administrators and teachers alike.

Sincerely,

Kathryn Krudwig
APPENDIX C

Informed Consent

Dear Teacher:

I am interested in studying factors in the teaching process that may impact teacher stress and career commitment. Factors such as teacher beliefs and teacher practices are of interest as possible contributors to both stress and commitment in teachers. I am hoping that the results of this study will provide valuable insights that will lead to greater support of teachers as they assume ever-increasing responsibilities to meet student needs.

Your participation will involve confidential completion of three surveys. Completing the surveys will take approximately 30 minutes. In addition, please have one class of your choice anonymously complete a short checklist about your teaching practices. It will take approximately 10 minutes for students to provide this feedback.

The study is designed to ensure you complete confidentiality. There is no risk of psychological, professional, physical, or social injury or discomfort to you. Data will be coded to enable analysis. The immediate benefit of participating is the knowledge that you are increasing the knowledge base related to improving the professional lives of teachers.

Your participation is voluntary and you are free to withdraw your consent and discontinue participation at any time without prejudice. No monetary compensation will be awarded for participation in the study.

The person to contact in the event of any questions regarding this research project is Kathryn Krudwig at (phone number) or (email address) if you prefer email communication.

I have read and I understand the procedures described above. I agree to participate in the study and I have received a copy of this description.

Participant .................................................. Date ..................................................

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Dear Teacher:

I am interested in studying factors in the teaching process that may impact teacher stress and career commitment. Factors such as teacher beliefs and teacher practices are of interest as possible contributors to both stress and commitment in teachers. I am hoping that the results of this study will provide valuable insights that will lead to greater support of teachers as they assume ever-increasing responsibilities to meet student needs.

Your participation will involve confidential completion of three surveys. Completing the surveys will take approximately 30 minutes. In addition, please have one class of your choice anonymously complete a short checklist about your teaching practices. It will take approximately 10 minutes for students to provide this feedback.

The study is designed to ensure you complete confidentiality. There is no risk of psychological, professional, physical, or social injury or discomfort to you. Data will be coded to enable analysis. The immediate benefit of participating is the knowledge that you are increasing the knowledge base related to improving the professional lives of teachers.

Your participation is voluntary and you are free to withdraw your consent and discontinue participation at any time without prejudice. No monetary compensation will be awarded for participation in the study.

The person to contact in the event of any questions regarding this research project is Kathryn Krudwig at (phone number) or (email address) if you prefer email communication.

I have read and I understand the procedures described above. I agree to participate in the study and I have received a copy of this description.

Participant ___________________________ Date ___________________________
APPENDIX D
Guide for Completing Surveys

This set of instructions matches the instructions given verbally at faculty meetings. It was included with survey materials at the two schools where principals chose to use school mailboxes for data gathering. The purpose of providing identical written and oral directions was to achieve consistency in giving directions across all eight school sites.

GUIDE FOR COMPLETING SURVEYS

As you can see, you have two envelopes. When finished, return your materials in these same envelopes.

FIRST ENVELOPE (RED DOT):

1. Open the envelope with the red dot and take out the materials.

2. The first sheet is a written consent form, and the second is your copy. It contains a brief explanation of the project and a guarantee of confidentiality for you. Sign my copy of the consent and keep your copy. I will separate all consent forms from the data so your name is not attached to your data.

3. The third page is your answer sheet, and the rest of the materials are the surveys. Complete the surveys, but don't ponder over any one question - just move quickly from one to the other (your time is too valuable to give much away). I was able to complete all of the surveys in 12 minutes.

4. Also, please don't write on the surveys themselves, as I need to reuse them to keep my costs under control.

5. Note that the directions for the stress survey (ORQ) are on your answer sheet, since I stapled the instrument open to the one part you will be completing. Ignore the rest of the ORQ booklet.

6. So, in the envelope with the red dot, you keep your copy of the consent form. I get everything else back.
SECOND ENVELOPE:

1. Within the next four days, have one class of your choice complete this short survey. It should take about ten minutes. I have included a sheet in the envelope that offers a user-friendly way to hand it out and collect it. If you give it to a class that happens to be mad at you, don't worry. Students across America get upset with their teachers regularly.

2. The reason that the student survey is so important is that I need it to answer four of my eight research questions.

3. There are 40 copies of the student survey in your envelope. If you need more for the one class you want to use, you can copy more or take someone else's extras. Please return any unused surveys in your envelope so I can reuse them.

4. Thanks again for your help!

Kathryn Krudwig
This set of instructions was included in each packet of student surveys. Its purpose was to ensure consistency in giving directions to teachers across all eight school sites.

**DIRECTIONS FOR ADMINISTERING STUDENT SURVEYS**

1. Have one class of your choice complete the student survey within the next four days.

2. To explain this activity to your class, simply say, in your best conversational tone:

3. "I am helping a researcher study education. Please complete this opinion survey - circle or mark your answers on the answer sheet, but don't put your name on anything. Either pencil or pen is fine. When you are finished, pass both the question page and your answer sheet to ________, who will put it in this brown envelope. Let's do this in about five minutes at the most."

4. If your students ask questions, like what will be done with the surveys or what the stamped number is for, feel free to further explain that approximately 3,000 students in northeast Florida are completing the survey anonymously to help in research about the stresses and conditions in education today. The number stamped on the sheet is needed for statistical data entry. All the answer sheets have the same number on them. It is impossible to identify who completed which survey, and no one wants to know who the students are. They can feel important in knowing that they were selected to represent students in northeast Florida.

5. Turn in your completed student survey packet, including the surveys and answer sheets, to ______________________ as soon as they are completed.

Thank you.

Kathryn Krudwig
APPENDIX E

Letter Sent after Initial Principal Visit

Dear (Principal's Name):

Thank you for our visit and for the opportunity to include your teachers in my research study. As we discussed, finding ways to keep our best teachers in teaching is one of the critical issues both in Florida and nationwide. I am making a serious effort to shed light on how teachers' use of best practice, role stress, and commitment to teaching interact. I hope new ideas for supporting the growth of expert teachers will result from my research.

I am looking forward to meeting your faculty on (date). As we agreed, I will give you the results of my study when I am finished. Thank you again for your time and positive response. It was a pleasure discussing educational issues with you.

Sincerely,

Kathryn Krudwig
Dear (Principal's Name):

Thank you for allowing me the time on (date) to survey your teachers. I was impressed by the positive climate they reflected during your faculty meeting. Please extend my appreciation to your teachers for their generous participation. I will return in about a week to pick up their survey packets. By the end of the school year, I will have completed my data analysis and will be happy to share my findings with you.

Sincerely,

Kathryn Krudwig
REFERENCES


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engagement and achievement in American secondary schools (pp. 119-152). New York: Teachers College Press.


# VITA

**KATHRYN M. KRUDWIG**

| EDUCATION       | M.Ed. Emotional Disturbance, May 1977  
|                 | University of Missouri, Columbia       |
|                 | BA Sociology, January 1971             
|                 | University of Missouri, St. Louis       |

| TEACHING LICENSURE | 1995 - current: K-12 Emotional Handicap, Florida |
|                   | Life: 1-8 Wisconsin                     |
|                   | Life: K-8 Missouri                      |
|                   | Life: K-12 Emotional Disturbance, Missouri |
|                   | Life: 1-12 Emotional Disturbance, Wisconsin |

| OTHER LICENSURE   | 1993- current: Certified Behavior Analyst |
|                  | Florida Certificate Number: 0378         |

| PROFESSIONAL EXPERIENCE | Visiting Instructor, College of Education and Human Services, University of North Florida, Jacksonville, 8/1/98 - current |
|                        |
|                        | Project Coordinator, Urban Teaching Residency Project, University of North Florida, Jacksonville, 8/1/97-6/1/99 |
|                        | Adjunct Instructor for College of Education and Human Services, University of North Florida, Jacksonville: |
|                        | • EED 4243: Instructional Strategies for Emotionally Handicapped Learners, Fall 1997 |
|                        | • EDF 3151: Nature of the Learner, Summer 1998 |

|              | Department Head for county-wide, self-contained program serving emotionally handicapped students, grades 7-9, at Wilkinson Junior High School, Clay County, Middleburg, Florida, 8/21/94 - 6/10/97 |
|              | Behavioral Specialist at Wilkinson Junior High School, Clay County, Middleburg, Florida, 8/17/93 - 6/10/97 |

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Elementary Teacher in public school settings in Missouri, 1972 - 1976

**PUBLICATIONS AND PAPERS**


**PROFESSIONAL PRESENTATIONS SINCE 1990**


Teaching from September to June and Living to Tell About It. *Clay County New Teacher Orientation Conference*, August 1997

*ESIS: Earning Success in School*. Florida Council for Exceptional Children, Miami, Florida, October 1993


**PROFESSIONAL MEMBERSHIPS & RECOGNITION**

Phi Kappa Phi
Graduate Council, *University of North Florida*, 1997-98
Doctoral Faculty Search Committee, 1997-98
Florida Speakers Bureau
State Board of Independent Colleges and Universities Council
Phi Delta Kappa
Council for Exceptional Children
Council for Children with Behavior Disorders
Clay County Teacher of the Year 1998

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