The effect of years of experience and other selected variables on attitudes of teachers toward aspects of the teaching profession
by Beverly June Rada Hollensteiner

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Education
Montana State University
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Abstract:
This study described differences in attitudes of teachers in comparison to selected independent variables, tested for interaction between intervals of experience and other selected independent variables and the dependent variables of attitude, and predicted attitudes of teachers based upon the selected independent variables. The independent variables were gender, education level, years of experience, marital status, teaching assignment, district size, and whether teachers were parents or nonparents. The dependent variables were attitudes toward teaching as an occupation, teaching skills, frustrations of teaching, relationships with supervisors and students, students and classroom climate, parents and students, professional responsibilities of teachers, and internal and external pressures of teaching.

The procedure used to gather data for this study consisted of a broad surveying technique. Teachers in Alaska, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington were sent a 70-item survey instrument and asked to respond on a Likert-type scale to the attitudinal questionnaire; 823 responses were used for statistical analysis.

Significant differences were found between teachers with different years of experience. Teachers with 5-9 years of experience were found to have more positive attitudes toward teaching' skills than those with 20-24 years of experience. Teachers with 5-14 years of experience indicated more frustration with teaching than those with 0-4 years.

Elementary level teachers were found to have more positive attitudes toward teaching as an occupation, teaching skills, students and classroom climate, and relationships with parents than high school teachers. Teachers with children were found to have more positive attitudes toward teaching as an occupation and relationships with supervisors and students than teachers without children. Teachers in districts with 10,000 or more students had less positive attitudes toward teaching skills than those in districts with 1-9999 students. Married teachers were found to have more positive attitudes than unmarried teachers toward teaching as an occupation and teaching skills. No significant differences were found between teachers with different levels of education. Male teachers had more positive attitudes toward students and classroom climate than females, while female teachers had more positive attitudes toward parents and students than males.

Overall, the attitudes of teachers in this survey were positive concerning the various attitudinal topics.

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by

Beverly June Rada Hollensteiner

A thesis submitted in partial fulfillment
of the requirements for the degree

of

Doctor of Education

MONTANA STATE UNIVERSITY
Bozeman, Montana

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APPROVAL

of a thesis submitted by

Beverly June Rada Hollensteiner

This thesis has been read by each member of the thesis committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

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ABSTRACT

This study described differences in attitudes of teachers in comparison to selected independent variables, tested for interaction between intervals of experience and other selected independent variables and the dependent variables of attitude, and predicted attitudes of teachers based upon the selected independent variables. The independent variables were gender, education level, years of experience, marital status, teaching assignment, district size, and whether teachers were parents or nonparents. The dependent variables were attitudes toward teaching as an occupation, teaching skills, frustrations of teaching, relationships with supervisors and students, students and classroom climate, parents and students, professional responsibilities of teachers, and internal and external pressures of teaching.

The procedure used to gather data for this study consisted of a broad surveying technique. Teachers in Alaska, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington were sent a 70-item survey instrument and asked to respond on a Likert-type scale to the attitudinal questionnaire; 823 responses were used for statistical analysis.

Significant differences were found between teachers with different years of experience. Teachers with 5-9 years of experience were found to have more positive attitudes toward teaching skills than those with 20-24 years of experience. Teachers with 5-14 years of experience indicated more frustration with teaching than those with 0-4 years.

Elementary level teachers were found to have more positive attitudes toward teaching as an occupation, teaching skills, students and classroom climate, and relationships with parents than high school teachers. Teachers with children were found to have more positive attitudes toward teaching as an occupation and relationships with supervisors and students than teachers without children. Teachers in districts with 10,000 or more students had less positive attitudes toward teaching skills than those in districts with 1-9999 students. Married teachers were found to have more positive attitudes than unmarried teachers toward teaching as an occupation and teaching skills. No significant differences were found between teachers with different levels of education. Male teachers had more positive attitudes toward students and classroom climate than females, while female teachers had more positive attitudes toward parents and students than males.

Overall, the attitudes of teachers in this survey were positive concerning the various attitudinal topics.

CHAPTER 1

INTRODUCTION

It has long been known that teachers change as they gain experience (Burden, 1982a,b,c; Katz, 1972; Ryan, 1977). Literature concerning these changes has revolved, for the most part, around teachers within their first five years of teaching (Fuller, 1969; Katz, 1972; Ryan, 1977; Newman, 1979; Adams, 1982; Adams & Martray, 1981; Hange, 1982). Descriptions of teachers' characteristics during their first five years are thorough. Research which extends past the five year experience level has been descriptive in nature and has involved small numbers of teachers (Peterson, 1979; Burden, 1982a,b,c; Burke et al., 1983; Burke and Kray, 1985).

First year teachers are described as "self-concerned" (Fuller, 1969). They are concerned about their ability to maintain discipline, improve teaching skills, and establish relationships with students, peers, and supervisors (Fuller and Bown, 1975; Fuller, 1969; Ryan, 1974; Applegate et al., 1977; Adams and Martray, 1981).

Teachers in their second year to fourth year of experience have increasing concerns about their instruction and decreased concerns about discipline and self (Adams, 1982). Burden (1982a) described these teachers as more "relaxed and confident." He further stated they had mastered initial instructional skills and were confident about trying new instructional methods. Katz (1972) concurred with Burden's

research and also added that teachers in their second, third, and fourth years of teaching are more aware of children's needs.

Teachers with five or more years of experience were described by Burden (1982a) as mature teachers who felt they had a command of their teaching environment and activities. Katz (1972) described individuals at this experience level as teachers who have begun to "search for insight, perspective, and realism" (p. 5). Hange (1982) found that teachers in their fifth year of experience had improved career satisfaction over less experienced teachers.

This researcher found other studies conducted beyond the five year experience level were few, included small sample sizes, and involved teachers from select groups. Peterson (1979) interviewed 50 retired secondary teachers and asked them to recall and describe changes in their attitudes about themselves and others throughout their career. The average age of these retired teachers was 71.6, and the average teaching career was 38.4 years.

Newman's (1979) study dealt with 10 public school teachers with 19 to 31 years of experience. As with Peterson's (1979) study, she asked them to look back over their careers and describe career and attitude changes at different levels of experience.

Burden's (1982a) study of 15 K-6 teachers who had four to 28 years of experience contained detailed descriptions of the teachers' first through fourth years of experience. Beyond the fourth year, descriptors of characteristics were given, but no years were assigned when certain characteristics, behaviors, or concerns were apparent.

Burke et al. (1984) conceptualized nine stages in a teaching career. These paragraphs described teacher characteristics at each developmental stage and were written to reflect the research (Fuller, 1969; Peterson, 1979; Burden, 1981) which has been done on teachers at different levels of experience and combined with adult developmental models (see Appendix B). The paragraphs were portrayed as being components in a career cycle and as teachers progress in their careers they pass through these developmental stages.

Besides relating the differing characteristics teachers have at differing years of experience, some researchers (Katz, 1972; Newman, 1979; Burden, 1982a; Burke et al., 1983) posited ideas which would encourage supervisors and planners of in-service to meet the specialized needs of teachers at different times in their careers.

Other researchers who spoke to the need for supervision which incorporated knowledge of teacher career differences were Burden (1982a) and Glickman (1985). Burden stated: "Since teachers have different needs and skills at various points in their careers, the type of assistance and the supervisory approach should be different for teachers at different developmental levels" (p. 12). Glickman proposed that effective supervision must respond to the developmental stages of teachers. Hall and Loucks (1978) developed a model of staff development which is based upon teachers' differing needs throughout their careers. The model centered around the idea of taking into account teachers' "personal satisfactions, frustrations, concerns, motivations, and perceptions" (p. 38) when creating in-service opportunities for teachers.

Teacher concerns, attitudes, behaviors, and characteristics have been examined by several researchers (Fuller and Bown, 1975; Fuller, 1969; Ryan et al., 1977; Peterson, 1979; Newman and Others, 1980). The need still remains, however, to assess teachers' attitudes over their entire career. Fitzgerald (1978) proposed that "broad and extensive surveying which suggested trends in teacher attitude toward the profession are needed" (p. 29) to assist administrators in guiding and supporting teachers in their efforts.

Statement of the Problem

The problem of this study was to determine whether attitudes of teachers toward various aspects of the teaching profession differ as they gain in experience or have different professional and personal characteristics.

Need for the Study

There is a need to identify teachers' attitudes in relation to their career experience stages and career development stages. Burke (1985) corroborated this need by stating:

> The evidence exists that there are identifiable career stages through which teachers progress. The need remains, however, to examine patterns of teachers' attitudes at various stages of their career and to develop a valid and reliable instrument to measure these attitudes (p. 241).

This is especially true once the teacher has passed the five year mark. Most of the research done in this area has dealt with the first five years of teaching experience; those studies which extended past

five years were few (Newman, 1979; Peterson, 1979; Burden, 1980). Sample sizes of less than 20 were used by Ryan, 1974; Ryan et al., 1977; Newman, 1979; and Burden, 1980.

The samples were also selective in the type of teachers who were interviewed. Fuller interviewed student teachers, and first year elementary teachers; Katz discussed pre-school teachers; Peterson worked with retired junior and senior high teachers; Applegate and Lasley (1979) used the same group of teachers that Ryan et al. used; and Hange (1982) used the same teachers that Ryan et al. used in 1977. Burden's (1980) study revolved around 15 elementary teachers with four to 28 years of experience. Three of the major studies which identified teacher characteristics at different years of experience were conducted "after the fact." Burden (1980), Peterson (1979), and Newman (1979) all asked teachers to look back over their careers and describe changes. Burke et al. (1983) advocated more study following a review of the literature concerning teachers' teaching skills, concerns, attitudes, and characteristics at different years of experience. They stated:

> These findings represent only a rudimentary data base in career-stage theory and professional development. Much scientific, quantitative research remains to be done to improve our understanding of teachers' careers (p. 17).

Burke et al. (1983) also mentioned teachers' needs in relation to professional development based on teaching career stages. In this article, the authors defined stages by grouping years of experience into early years, middle years, and later years. They proposed that through awareness of teacher career stages and knowledge of teachers'

attitudes at those stages, better professional development could be planned. This was corroborated by Greenfield (1983) when he stated:

> Administrators who understand the dynamics of careers and the problems associated with balancing individual and organizational needs may be able to develop and implement more effective short- and long-range plans (p. 23).

Not only is there a need to research teacher career experience and developmental stages to determine appropriate supervision and professional development practices, but the need remains to assess teachers' attitudes in general because of the impact that attitudes have on their instructional methods, the types of materials they use, and on the children they teach. Adwere-Boamah et al. (1982) stated:

> Teacher attitudes are of great significance in all educational deliberations, especially in matters of educational change. The extent to which they commit or fail to commit themselves to implementation of particular teaching strategies or new instructional approaches depends, among other things, on their attitude toward education. Thus, knowledge of the attitudes of teachers toward education may provide useful information to concerned educators (p. 17).

Rose and Medway (1981) stated, "Teachers who differ attitudinally vary in their teaching behavior" (p. 6). A statement by Wolfe and Engle (1978) supports the importance of teacher attitude:

> Underlying most of the studies of teacher attitude is the assumption, often implicit, that what teachers hold to be true characteristics of children and what they believe about the teacher-pupil relationships influence their behavior toward children. Teachers' classroom behavior, in turn, is assumed to have an effect on the intellectual and social development of the children under their supervision (p. 42).

General Questions to Be Answered

In each of the questions which follow, the teacher demographic data were: (1) years of experience, (2) marital status, (3) teachers with or without children, (4) gender, (5) district size, (6) education level, and (7) teaching level. The attitudinal factors were as follows: (1) teaching as an occupation, (2) teaching skills, (3) frustrations of teaching, (4) relationships with supervisors, (5) students and classroom climate, (6) relationships with parents and students, (7) professional responsibilities, and (8) internal and external pressures of teaching.

The general questions of this study were:

(1) Do the independent variable subcategories have significantly different means on each of the dependent variables?

(2) Do the independent variables of interval experience and gender, marital status, district size, education level, teaching level, and teachers with/without children interact with each of the dependent variables of attitude?

(3) Do the independent variables of interval experience, male/female, married/unmarried teachers, teachers with/without children, teachers in different size districts, and teachers at different levels of education account for the variability seen in the dependent variables?

General Procedure

(1) A thorough review of the literature, as it pertained to characteristics of teachers at different years of experience and models of teacher development, was conducted. Research concerning teacher attitudes and influences on teacher attitude was also conducted to familiarize the researcher with influences upon teachers and the implications teacher attitudes have for classroom learning.

(2) A random sample of teachers who were members of the Montana, Oregon, Washington, Nevada, Hawaii, Alaska, and Idaho Education Associations was drawn and surveys mailed out during the month of October, 1987. The sample was a proportional random sample based upon teacher gender. A total of 1,890 survey instruments were mailed. Of those returned, 823 were usable for analysis.

(3) Follow-up postcards were sent to persons who did not return the surveys.

(4) The 70 items which made up the survey instrument were subjected to a factor analysis to determine which variables intercorrelated with one another. The resulting factors were used as dependent variables in this study.

(5) Data were compiled and statistical analysis completed to determine whether differences in attitude occurred between teachers with different demographic data, whether there was interaction between the independent variable of interval experience and in turn each other independent variable on all factors of the dependent

variables, and whether it was possible to accurately predict attitudes of teachers based upon the demographic data used in this study. The .05 level of significance was used.

Definition of Terms

(1) Career experience stage: Characteristics of teachers at different levels of experience from the first year of experience to retirement.

(2) Career development stage: Cyclical, linear, or flexible models of teacher development which describe characteristics of teachers at different times during their teaching career. Teacher experience level and/or age may be included.

(3) Interval experience: Eight levels of teacher experience divided into five years of experience levels.

(4) Attitude: A belief, viewpoint, or value which will cause an individual to behave in a certain way.

(5) Changes: Relates to different job skills, knowledge, behavior, attitude, and concerns which teachers have over the span of their careers.

(6) Supervision: An act of ongoing teacher development through intervention by persons whose major aim is to improve teachers' performance in the classroom.

(7) Staff development: Planned instruction for teachers which will lead to improved performance in a classroom situation.

(8) In-service: Instructional activities to which teachers are exposed which are designed to promote teacher growth, change in

teacher attitude, or change in teachers' behavior which will lead to improvement in teachers' performance in the classroom.

(9) Characteristics of teachers: Refers to attitudes, beliefs, values, behaviors, knowledge, concerns, perceptions, needs, and skills teachers have.

(10) Full-time: Persons whose job description includes at least six hours a day, five days a week of instructionally related duties for students age 5-18.

(11) Teaching level: The grade range taught by a teacher (K-6, 7-8, 9-12, and specialists).

(12) Education level: A teacher's educational level based upon degree and number of credits past a given degree (BS-BS+45, MS-MS+45, and specialist or doctoral degree).

(13) District size: The size of a school district determined by the number of students enrolled. The researcher arbitrarily set the categories as 1-999, 1000-1999, 2000-4999, 5000-9999, and 10,000 or more.

(14) Factors: Refers to the eight attitude subscales which were used in this study. They are: Attitude Toward Teaching as an Occupation, Teaching Skills, Frustrations of Teaching, Relationships with Supervisors and Students, Students and Classroom Climate, Relationships with Parents and Students, Professional Responsibilities, and Internal and External Pressures of Teaching. On subscale three, Factor 3, Attitude Toward Frustrations of Teaching, a high mean score denotes less frustration.

On all other subscales, a high mean score denotes a more positive attitude.

The next step toward completion of this study was to conduct a thorough review of related literature. This review can be found in Chapter 2.

CHAPTER 2

REVIEW OF LITERATURE

Introduction

Literature revolving around teachers' concerns, characteristics, attitudes, and behaviors during different levels of experience was researched. Supervision, in-service, and staff development needs of teachers at these different levels of experience were also reviewed as they were available within the research. Discussions of teacher career developmental models were researched and incorporated.

The organizational format used to present this data will be in ascending order of teaching experience. Research detailing concerns, characteristics, attitudes, and/or behaviors of student teachers and those teachers in their first year of teaching will be presented first. This will be followed by research which studied subsequent years of experience. Conceptual frameworks for teacher career developmental models are presented last.

Student Teaching and the First Year of Experience

Fuller (1969) found evidence to support a theory that teachers' concerns change as they move through levels of experience. Through a process of summarization of previous research and her own research, she found consistencies in concerns student teachers have in comparison to

more experienced teachers. Beginning teachers are more concerned about class control, their own content adequacy, and about evaluations by their supervisors and their pupils than more experienced teachers. Experienced teachers were characterized as "significantly less often concerned with maintaining discipline and with criticism from inspectors" (p. 216) than beginning teachers.

Jackson's 1968 study (cited in Fuller, 1969) supported the idea that experienced teachers were more concerned about their pupils than themselves and were less concerned with discipline and self-adequacy. Fuller and Bown (1975) divided these concerns of teachers into three stages: the survival stage, the mastery stage, and the third stage. The survival stage referred to those teachers facing their first contact with students. They were concerned about class control, mastery of content, and evaluations by supervisors. The mastery level stage begins when "teachers are trying to perform well" (p. 37), and the third stage begins when teachers settle into "stable routines and become resistant to change or else become consequences-oriented: concerned about impact on pupils, and perhaps responsive to feedback about themselves" (p. 37). Other than the survival stage, Fuller and Bown did not assign these developmental stages to any specified year of experience. They did, however, assume they were linear in nature.

Ryan (1974) referred to the first year of teaching as the "most turbulent, frustrating, and painful one in a young teacher's life" (p. 2). His research confirmed and extended the findings of Fuller and Bown. Ryan believed one of the major problems confronting beginning teachers is that of culture shock. This occurs when the beginning

teacher finds him/herself the "actor rather than the audience" (p. 2) in the classroom situation. The setting is familiar but the amount of work and feelings of inadequacy in monitoring students, motivating students, and preparing to teach students is overwhelming. Instructional concerns arise when students in the classroom fail to achieve and the beginning teacher lacks the materials and methods of instruction needed to assure achievement. Ryan and Fuller expressed similar ideas concerning discipline. Ryan stated, "There is probably no single thing that causes beginning teachers more trouble and more anxiety than discipline problems" (p. 11).

Ryan (1974) also mentioned beginning teachers' expectations of parents as being people who will be "allies" in helping them to work with their children. Parents from different social backgrounds, with different attitudes, or with different expectations can cause the beginning teacher much stress. Another area of concern to the new teacher is his/her relationship with the administrator or principal. Ryan (1974) stated:

> As complex as the administrator's job is, it is even more complex and more difficult for the new teacher. He must be aware continually of 'which administrator' he is dealing with: Is the principal sitting in on my class as the judge, or as helper or what? (p. 24).

The isolation of the new teacher was also a concern of Ryan's. Interactions with other members of the staff are limited by the "structured forces" of the school. New teachers "rarely work in close enough proximity to allow for mutual observation and sustained professional discussion" (p. 17). As with Fuller's study, Ryan also

found first year teachers feeling insecure and doubtful about their "personal and professional competence" (p. 23).

Ryan (1974) suggested these new teachers be assigned "buddy" teachers, be given special orientation prior to the first day of school, and that they be provided with in-service opportunities which would allow for discussion of problems and concerns throughout the year.

A 1977 study done by Ryan et al. investigated the concerns and problems of teachers in their first four months of teaching. Eighteen teachers participated in the study, ranging in age from 22 to 45. Six taught in the elementary grades, six in the middle grades, and six at the senior high level. Fifteen of the 18 taught in regular classroom situations; the remaining three were special classroom teachers. This study supported the earlier work done by Ryan (1974) and the study performed by Fuller (1969). First year teachers were concerned about themselves and their competence in teaching a particular subject, managing a classroom, and in dealing with discipline problems. They worried about what the principal, fellow teachers, and their students thought of them. Another issue which this study uncovered was the first year teachers' frustration with procedural matters, i.e., how to run a ditto machine, how to sign up for film projectors, and how to organize and use school time efficiently.

Johnston (1981) also sought to describe first year teachers. He interviewed 13 teachers from elementary, junior high and senior high levels. The two interviews were done between March and April and then again in June. The teachers he interviewed displayed similar

developmental patterns to those described by Fuller (1969) and Ryan (1974). They changed from teachers who were "simply with their students" (p. 25) into teachers who saw students learn because of their teaching and who were able to tend to the instructional needs of students. They described being more comfortable and relaxed with the subject matter and the instructional process. They also felt they had become part of the school culture and had been accepted by other faculty members. Lastly, they expressed confidence in themselves as professionals and managers of children.

The Second Year of Experience

Applegate and Lasley (1979) did a follow-up study on 12 of the original 18 teachers from the 1977 study done by Ryan et al. during their second year of teaching. Applegate and Lasley found attitudinal changes had taken place between the teachers' first four months of first year teaching and the end of their second year of teaching. Their attitude toward their ability to handle discipline problems became more positive. Their attitude toward the principal did not change. The teachers "did not see the principal as having any real effect on their classroom teaching" (p. 6). The second year teachers felt more accepted as members of the faculty and felt able "to return favors they had asked for in the first year" (p. 7). At the end of their second year, these teachers "overwhelmingly" felt they were more effective teachers and that their classroom instruction was better than in their first year. These second year teachers also reaffirmed Fuller's (1969) contention of more experienced teachers being less

self-concerned and more student-concerned. The teachers in this study experienced enjoyment from their relationships with students. "Being with the students" (p. 11) was a major source of satisfaction. However, many reported they were less positive and more intolerant of students. They attributed this to their "shedding of idealistic views" (p. 15) and becoming more realistic.

Other concerns of these second year teachers centered around becoming better teachers, being more effective in the classroom, and keeping discipline consistent. They did not "fear" teaching and began to be more realistic about their own expectations concerning themselves, students and parents.

One to Five Years of Experience

Katz (1972) formulated four developmental stages of preschool teacher growth and tied them to the first five years of teaching. She stated: "Individual teachers may vary greatly in the length of time spent in each stage" (p. 50). Katz also outlined training and staff development needs of the teachers in the various stages. The survival stage (approximately zero to one and one-half years of experience) included many of the same concerns related by Fuller (1969), Ryan (1974), and Ryan et al. (1977). Katz's survival teachers were concerned with "getting through a day in one piece" (p. 50), acceptance by colleagues, and "Can I make it until the end of the week?" (p. 50). She recommended that these teachers receive on-site support, encouragement, and guidance. Katz suggested the trainer be available when needed and that they also schedule periodic visits.

In the second, or consolidation stage (approximately one and one-half to three years of experience), teachers were described as beginning to concentrate on children. They were able to identify children who deviated from the norm and who had special needs. They also became aware of what to expect from young children. During this time, Katz recommended teachers receive continued on-site assistance and access to specialists who could help with specific problems concerning children. The opportunity to share experiences with other teachers was also suggested.

Katz's third stage, the renewal stage (two and one-half to four years of experience), was characterized by the teachers becoming interested with new developments in the field and in trying new techniques and approaches. To accommodate this need, Katz believed these teachers should attend conferences, join professional organizations, and have access to journals and magazines.

The mature stage in Katz's continuum occurs at the end of three years for some teachers and for others at five years or more. Teachers who reach this stage begin to ask themselves more abstract questions. They are interested in their philosophies of education, the development of children, how educational decisions are made, and whether teaching is a profession. Katz asserted teachers at this stage should continue to attend conferences and read journals and books. Some may enroll in advanced degree programs.

Katz made the point in her article that "training needs of teachers change as they gain experience and as they move from one stage to another" (p. 53). The location of the training and the timing of

the training should also fit the needs of the teachers as they move through their careers.

A longitudinal study done by Adams and Martray (1981) collected data on teachers' concerns over a six year period, ranging from their student teaching experience to the end of their fifth year of teaching. In this study, 152 teachers were selected and at the end of six years, 53 remained as part of the sample group. The Teacher Concerns Checklist (TCC) designed by Fuller and Parsons (1974) was refined by Adams (1980) prior to its use in this study. The TCC identifies concerns with adult perceptions, pupil perceptions, instruction, discipline, academics, and school environmental influences. Over the six years of this study, several trends in teacher concerns were found. They are summarized as follows:

(1) As experience increases, concern with adult perception decreases.
(2) As experience increases, concern with pupil perception decreases.
(3) As experience increases, concern for instructional effectiveness increases.
(4) As experience increases, discipline concerns decrease slightly.
(5) Student teachers and fifth year teachers had lower concerns for academic success than first and third year teachers. Secondary teachers showed a slight but steady decline in concern for academic success.

Fuller's study (1969) is supported by Adams and Martray's (1981) findings. Teacher self-concerns decrease across experience levels. Two areas of concern which were consistently high across all levels of

experience were problems of student discipline and motivation and student academic success and well-being.

Adams (1982), in a separate article, discussed the use of the Classroom Observation Record to record "effective" teaching behavior. Through the use of this observation record, he was able to report that teachers in their first five years showed a change in "effectiveness" across experience levels. Teachers had a dramatic increase in their "organized/systematic behavior, affective teaching behavior, and surgent/stimulating teaching behavior" (p. 42). Elementary teachers also showed a significant gain in a tendency to increase desirable pupil behavior. He also reported that the elementary teachers in this study were more child-centered than secondary teachers. Secondary teachers, however, asked more questions and had a more interactive style with students.

A study done by Hange (1982) was a follow-up study using 15 of the original 18 teachers involved in the study by Ryan et al. (1977). Many of the interview questions asked of these teachers were the same as those used in the First Year Teacher Study which was done by Ryan et al. Hange investigated the teachers' commitment to education, their high and low periods in the last five years, and whether or not their perception of the importance of teaching had altered. Hange found that 10 of the 15 teachers had changed their perception of the importance of a teaching career. Seven out of the 15 still thought teaching was highly important to them, while the other eight indicated different levels of their commitment to teaching. Only two expected to be teaching for the next 10 years. Overall, the teachers in their fifth

year reported low commitment to the teaching profession. However, those who had remained in teaching indicated that they had become more satisfied as they gained experience and that the fifth year was their "best" one yet.

A statement by Kevin Ryan (1970) speaks to this issue of low commitment: "Over fifty percent of those who receive certification upon graduation are not teaching two years later. Over half of the first-year teachers do not intend to be teaching five years later" (p. 164).

Five or More Years of Experience

One study which extended past the five year mark was done by Burden (1980). He conducted focused interviews with 15 teachers and asked them to describe their perceptions of how they had changed both personally and professionally over their teaching careers. All 15 teachers taught in regular elementary classrooms in seven suburban school districts in central Ohio and had between four and 28 years of teaching experience. Following this study, Burden identified different teacher characteristics during different periods in teachers' careers. He also identified a sequence of changes teachers went through within each period or stage. He described these changes as occurring gradually and cumulatively. The sequence was described as follows: an increase in knowledge, which led to a change in attitude, which increased ability, which led to a change in job performance. The characteristics of these teachers were grouped into characteristics of

the first year of experience, the second, third, and fourth years of experience, and five years and over of experience.

The characteristics of first year teachers described by Burden were similar to characteristics described by Katz (1972), Fuller (1969), and Ryan et al. (1977). These teachers remembered their first year as one in which they felt confused and uncertain. They expressed that they had limited knowledge of the teaching environment and teaching activities. They were concerned about their ability to maintain class control, teach the subject matter, and improve their teaching skills. They felt inadequate and were concerned about their success as teachers. They also reported the first year as a time when they were not certain they wanted to make a career of teaching. This supported Ryan's contention that first year teachers lack commitment to teaching.

A supervisory approach was suggested by Burden (1982a) for teachers at this survival stage. The supervisor should present, direct and demonstrate for these inexperienced teachers. S/he should also take the primary responsibility for helping the teacher identify concerns and then assist in helping the teacher to address those concerns.

During the second, third, and fourth years the teachers in this study reported feeling more knowledgeable about teaching activities and the teaching environment. They recalled being more relaxed and confident and willing to try new teaching methods. They knew more about children and felt better able to deal with their needs. A decrease in self-concern was mentioned. In Katz's (1972) consolidation, renewal, and maturity stages (approximately one and one-half to five or more years of experience), descriptions of teachers are in line with what

Burden (1982a) found during the second, third, and fourth years of teaching. In Katz's consolidation stage (one and one-half to three years of experience), teachers concentrated more on children than selves, and during the maturity stage (three to five or more years of experience), the teachers became interested in learning new methodologies. Both of these characteristics supported Burden's findings.

Within this two to five year period, Burden (1982a) recommended a collaborative supervisory approach. The teacher and the supervisor should take equal responsibility for meeting the expressed needs of the teacher. The supervisor should present, clarify, listen, and help the teacher to problem solve.

Teachers with five or more years of experience who were interviewed by Burden (1982b) described those years as ones in which they had a good command of planning and organizing teaching activities. They knew the children, the curriculum, and different teaching methods quite well. They were more perceptive of the teaching environment and felt they could respond well to the complexities of children. They also reported feelings of confidence, security, and maturity. They felt they could handle most situations and were willing to experiment with new teaching methods. These teachers also recalled trying to "keep teaching interesting for themselves" (p. 22). To do this, they changed grade levels, schools, or they changed aspects of their classrooms by adding learning centers or rearranging the room. Teachers in the fifth year and beyond also reported becoming more committed to teaching.

Burden (1980) noted more changes in attitudes and outlooks in the first four years among these teachers than he noted in the fifth year and beyond. He also found teachers' development was affected by their personal lives in a positive manner. No teachers reported any negative effects on their teaching from an influence in their personal lives. Some teachers, however, reported tension within their family relationships because of their professional lives. A study done by Gehrke (1979) confirmed this role conflict and resulting tension. Gehrke reported role conflict arose when teachers, especially female teachers, tried to mesh the role of teacher, mother, and wife. Gehrke believed these personal-professional role conflicts arose from "concurrent demands for time and allegiance" (p. 17) between their jobs and their families. Gehrke's study included 10 secondary teachers during their first, third, and fourth years of teaching. The major objective of her study was to identify teachers' role conflicts.

Newman (1979) interviewed 10 public school teachers with experience ranging from 19 to 31 years. She described tentative stages in a teaching career based upon experience level. The "early" years were spent in moving from school to school or switching grade levels. These years were also a time to reconsider the decision to be a teacher. High satisfaction was also reported. In their twenties, they reported taking time to have families or attend graduate school. Katz's (1972) maturity stage (three to five or more years of experience) would fit with this time frame for teachers. The second experience stage was noted when teachers reached age 30 and they settled into a stable position. They described this as a time when they were updating their

teaching and were effective teachers. The early forties, the third career experience stage, was characterized by these teachers as low in satisfaction. Newman attributed this to midlife stress. The last stage occurred as teachers neared retirement; they "seemed to face a crisis in deciding whether to retire" (p. 6). Some felt "sorry" teaching was not what it had been, some had financial considerations, and some did not regret that they had become teachers.

Another study which gathered further information about teachers' concerns and reflections of their teaching career was done by Peterson in 1979. Her study consisted of 50 retired teachers, 27 females and 23 males, who were an average age of 71.6 years and had spent an average of 38.4 years in the classroom. These teachers were either junior high or high school teachers and 46 of the 50 had retired from the Columbus Public School System in Columbus, Ohio. Peterson interviewed each person in their home for a period of two to four hours and asked them to recall the highlights of their careers and why they had decided to become teachers. Peterson described changes in levels of commitment to teaching and of job morale plus the changes associated with the physical process of aging. She also discussed the changes these teachers perceived in levels of patience and tolerance.

The teachers in Peterson's (1979) study reported the highest time of commitment to teaching occurred in the early and middle years of their teaching careers. Their late twenties and early thirties age ranges were times when commitment waned. Peterson associated these changes with the demands of the teachers' families. She stated, "Decreased commitment in teaching in the early career appeared to have

been associated with personal and financial pressures of establishing and maintaining a family" (p. 26). The study performed by Gehrke (1979) confirmed these findings. She stated, "Teachers are asked to decide whether they will commit time and loyalty to their jobs or to their families" (p. 17). Burden (1980) also reported teacher changes because of family demands past the five year mark.

Peterson's (1979) retired teachers also alluded to low commitment to teaching during their mid-fifties which continued until retirement. This lower commitment to teaching in the latter part of the teachers' career was associated with "biological aging and loss of energy and enthusiasm for teaching" (p. 26). The teachers in Newman's study (1979) reported "moderate dissatisfaction" and declining energy in the early fifties. These two studies would seem to concur during this age range.

Questions which were asked concerning job morale and the teachers' "happiest times" in teaching were reported by Peterson (1979) as very consistent. Out of the 50 teachers interviewed, 46 identified their "happiest time" as beginning at an average age of 38.3 and ending at the average age of 49.9. Peterson indicated this time coincided with the time these teachers took their last teaching assignment. A contrast to these findings can be found in Warren A. Peterson's (1964) study in 1953, whose population consisted of 56 female, white, high school teachers who were 30 to 70 years of age. These teachers reported that their "best time" in teaching lasted until age 25 and then began to decline around age 35 or 40.

A study done by Farber (1984) on stress and burnout in suburban teachers found the 34 to 44 age level and those teaching at a junior high level at most risk for burnout. Farber's study supports the decline of "best time" for teaching reported by the teachers in Warren A. Peterson's (1964) study in the mid-thirties up to 40 and beyond.

In contrast to earlier studies cited concerning the first years for teachers as being ones of frustration and concern over discipline and instruction, the teachers in the Peterson (1979) sample reported overwhelmingly (48 of the 50) that their "first years in teaching had been successful and satisfying" (p. 32). They did not recall the early years, however, as ones in which they used innovative teaching techniques. This seems to support Fuller (1969) and Katz's (1972) research which indicated first year teachers are trying to "survive" and don't have the inclination to try new teaching methods. Peterson's (1979) teachers also reported the early years as a search for higher salaries and better teaching circumstances.

A study done by Becker (1952) of 60 teachers in the Chicago system found "the new teacher typically begins her career in the least desirable kind of school" (p. 472). Becker describes the first year as a "variety career" characterized by an immediate attempt to move to a "better" school in a "better" neighborhood. The teachers interviewed in Peterson's study (1979) had entered the teaching field between 1925 and 1934 and had retired between 1970 and 1977. The teachers in Becker's study and Peterson's study were teaching during the same era where it was common practice to start beginning teachers in the "least desirable" position and then expect them to "move to a 'better'

school." This researcher believes this practice might account for the reported early moving of the teachers in Warren A. Peterson's (1964) study.

Two-thirds of the teachers in Peterson's study reported "feeling satisfied with themselves and their careers" (p. 31) upon retirement, even though it was a time of lower commitment to teaching. Peterson stated, "They were generally able to maintain their job morale, even though they sensed that their most productive and fulfilling years in teaching were behind them" (p. 34). Concerns over aging, lack of energy, and changes in physical appearance were reported by these teachers during different years of experience or at different ages. Illness and injuries in their forties and fifties caused some of these teachers to lose the energy needed to continue coaching or teaching physical education. This forced them to retrain themselves in the mid-career phase and to assume different responsibilities. Women in their forties and fifties were more concerned about changes in their appearance. They worried about being "too old to teach" (p. 34). Men and women alike became aware of their physical aging when they came into contact with former students. Peterson stated, "These teachers were often unaware of the physical processes of aging until they confronted a former student or until their age somehow separated them from others in the school" (p. 34).

In response to the question about how they had changed as they grew older, 60 percent of these teachers responded in regard to their perceived level of tolerance and patience. Of the 50, 20 reported becoming more tolerant and patient and 10 reported becoming less

tolerant and patient. These changes in attitudes were reported as beginning in the late forties and early fifties.

Peterson (1979) also noted these teachers' changes in attitudes toward students, parents, members of the school community, colleagues, and administrators over the span of their careers. She found that the teachers' perceptions of these people changed over time. The teachers reported growing closer to their colleagues of the same age but away from their students and their parents. The men in the study were very critical of administrators while the women early on in their career reported "looking up to the principal" (p. 44) and deferring to his/her direction. As women gained experience, however, they reported they also gained "the ability to manipulate school personnel in order to achieve their ends" (p. 45).

A study which was begun in 1948 by Ryans (1960) identified attitudes of teachers toward pupils, peers, administrators, and parents which yielded some early data on teachers' attitudes. Findings of the study included:

(1) Elementary teachers showed more favorable attitudes than secondary teachers, especially toward pupils.

(2) Elementary teachers with less experience used more democratic classroom procedures than those with more experience.

(3) At the secondary level, teachers with more than 20 years of experience seemed to have less positive attitudes toward pupils and more positive attitudes toward administrators.

(4) The age of teachers had no association with their attitudes.

(5) Teachers with more than 20 years of experience were more traditional and subject matter oriented.

(6) Teachers who were 55 or older tended to be less friendly, understanding, innovative, and imaginative than younger colleagues.

Peterson (1979) said of Ryans' findings, "Teachers' attitudes about teaching and about themselves vary across career according to age and level of experience" (p. 18).

Developmental Stages

Researchers (Katz, 1972; Gregorc, 1973; Fuller, 1969; Fuller and Bown, 1975; Burke et al., 1984) have also conceptualized developmental stages of teachers by describing their characteristics, attitudes, and behavior during different times in their career. These stages are thought of as either on a continuum, or as nonlinear, that is, teachers may move back and forth out of the stages as they progress through their careers. Katz (1972) described developmental stages identified along a continuum of development. Fuller (1969) and Fuller and Bown (1975) divided concerns of teachers into developmental stages. They, too, assumed the stages to be on a continuum.

Gregorc (1973), however, stated that teachers may regress in a stage when new or different responsibilities are presented. Gregorc identified these developmental stages as: the becoming, the growing, the maturing, and the fully functioning. The becoming stage is described as a time when the teacher is ambivalent about commitment to teaching. Gregorc also indicated teachers in the becoming stage are

developing initial concepts about the purpose of education, the nature of teaching, and what their role is in education. The growing stage, as described by Gregorc, is one in which the teacher has a "feeling for the expectations of the community, parents, students, and fellow educator" (p. 3). He/she has also increased knowledge of materials, equipment, students, and him/herself. Gregorc's maturing stage of teaching development is characterized by teachers who have made a commitment to education. They use varied resources, try new methods of teaching, and begin to alter techniques so students achieve more. He also asserted that stress can occur at this stage because of the tension generated from coping with old views and new insights. The final stage, the fully functioning professional, includes teachers who have made a definite commitment to teaching, are immersed in the process of education, and are constantly testing their beliefs and concepts. These teachers also feel confident in their ability to handle discipline, to use a variety of teaching styles, and in understanding the educational process.

Burke et al. (1984) have also suggested components of developmental stages. They have identified nine stages and emphasize that these are not lock-step stages, but are cyclical in nature. They call their model the Teacher Career Cycle Model. The stages, as described by Burke et al., were developed by incorporating the studies of Burden, Newman, Applegate, and Feiman and Floden (cited in Burke, 1984) along with principles of adult growth and development (see Appendix B).

Glickman (1985) referred to developmental stages in the context of conceptual, moral, cognitive, and ego development. He integrated

knowledge of adult life transitions with knowledge of teachers' life transitions in comparison to the teaching profession. Glickman said of the teaching occupation, "Occupational development of teachers appears to run counter to the needs of adults in critical transition times" (p. 56). He asserted that it is the responsibility of the supervisor to "develop ways to provide advancement, recognition, and/or status in a teacher's career in order to realize further growth" (p. 66); further growth meaning growth in teachers' conceptual, moral, cognitive, and ego development so that they can become more productive in the workplace.

The next step in this study was to explain the procedures to be used, the population to be sampled, the methods by which the data will be collected and reported, and the statements regarding the hypotheses and research questions. This is reported in Chapter 3.

CHAPTER 3

PROCEDURES

Introduction

The problem of this study was to determine whether attitudes of teachers toward various aspects of the teaching profession differ as they gain in experience or have different professional and personal characteristics.

The method of organizing and presenting the information in this chapter is as follows:

(1) A description of the population and the sampling procedures which were used.

(2) An explanation of the dependent and independent variables.

(3) The method of collecting the data.

(4) The method of organizing the data.

(5) A listing of the research questions and the statistical hypotheses.

(6) The analysis of the data which was used.

(7) A description of the precautions which were taken for accuracy.

Population Description

The population of this study included teachers who are members of the Montana, Oregon, Washington, Nevada, Hawaii, Alaska, and Idaho

Education Associations. These states were chosen through a process of elimination. The National Education Association does not allow for use of individual state membership lists without the consent of the state president. This researcher chose to narrow the scope to states in the Northwest region of the United States served by the National Education Association (NEA). Each state president was contacted in this region and seven out of the eight state presidents agreed to assist in this study by supplying a randomized list of teachers in their state. For the purposes of this study, only K-12 certified full-time teachers were surveyed. Those surveyed were also employed in a public school system. This population has approximately 125,000 members.

Sampling Procedure

A proportional random sample of 1,890 teachers from this total described population was drawn from the pool of teachers. A Moser double cross-validation was used resulting in a sixty-to-one ratio of teachers to each independent/dependent variable. Based upon the seven demographic and eight attitude variables, or 60 times 15, this would total 900 participants needed for this study. A total of 1,890 surveys were mailed. This sample was drawn using gender as the criteria for the proportional stratified random sample. Those teachers who were selected were mailed a copy of the survey instrument, a self-addressed stamped envelope, and the demographic data sheet. The survey instrument was constructed with answers to be marked on a mark-sense form. The packet of materials was mailed in late October, 1987. Those persons not returning surveys within four weeks from the date of

mailing were sent a follow-up postcard reminding them of the survey pamphlet and the need for the information.

Explanation of Independent and Dependent Variables

The different attributes of the dependent variables included teachers' attitudes concerning teaching as an occupation, teaching skills, frustrations of teaching, relationships with supervisors and students, students and classroom climate, relationships with parents and students, professional responsibilities, and internal and external pressures of teaching. The independent variables, or demographic data, included: years of teaching experience divided into eight five-year intervals, marital status, teachers with or without children, gender, district size, education level, and current teaching level (K-3, 4-6, 7-8, 9-12, or specialist). The student population district size was coded using the following ranges: 1-999, 1000-1999, 2000-4999, 5000-9999, 10,000 or more. The education levels were coded into BS/BA-BS/BA+45, MS/MA-MA/MS+45,s and doctoral or specialist degree.

Method of Collecting Data

The instrument used in surveying the teachers was adapted from the survey instrument designed by the Collegial Research Consortium, Ltd., 1986 (Judith Christensen, Project Director; Peter Burke, John McDonnell, Jay Price, and Ralph Fessler). The Teacher Career Cycle Inventory was designed by Price (1986) to assess teachers' perceptions and attitudes toward various topics of concern to teachers. This

instrument was one of four which was developed by Price. Price developed the instrument in a two-stage process. Practicing teachers who were enrolled in graduate classes at four institutions responded to the self-selection paragraphs (see Appendix B) which had been developed by Burke et al. (1984). The teachers then wrote statements describing why they had selected a particular career stage. These statements were coded and resulted in 107 statements for the pilot testing. The pilot study respondents were asked to respond on a five-point scale ("not at all," "not very well," "somewhat," "fairly well," and "very accurately") to the 107 questions. A pilot sample of 135 pre-service and in-service teachers was included in this sample. Following this pilot study, the Teacher Career Cycle Inventory was reduced to 58 items. These 58 items were selected on the following criteria: (1) The items obtained differences among the five Self-Selection Career Stages at or beyond the $p=.10$ level of significance, and (2) the items obtained relatively high loadings on one factor after a varimax rotation of the factor matrix. The 58 remaining items accounted for 32.2 percent of the variance.

A study sample of 3600 from a market survey firm's master list of approximately 87,000 teachers in the United States was then undertaken. This group of 3600 teachers was randomly divided into seven groups of teachers, 1200 of whom received all the instruments; the six remaining groups of 400 each received various sets of the four instruments along with the demographic sheet, the Self-Selection Career Stage, and two of the remaining instruments. Of the 1200 teachers who received all four instruments, 216 responded, representing an 18 percent return rate.

The Teacher Career Cycle Inventory was again subjected to a factor analysis whose initial solution produced 13 factors with eigenvalues greater than 1.0 and accounting for 66.1 percent of the test variance. Following rotation, the first five factors accounted for 78 percent of the variance. The SPSS-X program for factor analysis was used to analyze the instrument. The factors were named: (I) Teaching as an Occupation, (II) Teaching Skills, (III) Frustrations of Teaching, (IV) Professional Aspects of Teaching, and (V) Student Interaction (see Appendix B).

This instrument was adapted and used in this study. The adapted instrument was changed in three ways. The response was changed to a four-item response: "strongly agree," "moderately agree," "moderately disagree," and "strongly disagree." A review (Shaw and Wright, 1967) of numerous attitude scales revealed that the use of the agree/disagree format is more common. The change in format necessitated the rewording of some of the items; this was the second change. The third change occurred with the addition of items which dealt more specifically with principals and immediate supervisors, parents and students, and with professional responsibilities of teachers. The new items were taken from the Attitude Toward Personal Teaching Behaviors Instrument developed by Burke (1985) or developed by this researcher.

Before this adapted instrument was sent out to the sample drawn from the various participating states, it was field tested for readability and construct validity by 50 teachers in the state of Montana. These teachers volunteered to assist the researcher by responding to the survey and assessing the questions for quality,

applicability, and clarity. The cover letter and the career stages sheet were also included in the packet which was sent to these teachers. The comments offered by these teachers from Great Falls, Livingston, Belgrade, Gallatin County, Kalispell, and Bozeman were assessed by the researcher, and the instrument was changed to reflect comments by deleting, rewording, or adding items. The teachers also relayed information concerning the amount of time needed to fill out the instrument, which was helpful in judging the number of items retained or deleted. The Self-Selection Career Stage sheet (Burke, 1985) (see Appendix B) was retained at this point because of the high interest shown by teachers. This revised instrument was then sent out to the teachers in the seven states.

Following receipt of the 823 survey instruments, a factor analysis was done using only the questions from the original Teacher Career Cycle Inventory developed by Price (1986). This factor analysis resulted in eight factors and accounted for 52 percent of the variance. The eigenvalue was set at 1.0 and the Kaiser guideline of .30 was used for the cutoff values as per the original study. The change in the variance from the original study (78 percent) to this study (52 percent) may have been caused by the difference in sample size (216 as compared to 823). Kerlinger (1986) stated that not only do different samples, to some degree, cause factors to differ, but differences in sex, education, social and cultural background, and intelligence can cause factors to appear.

The reliability of the instrument, or the extent to which the results were the same, was shown in the first three factors by similar

loadings. On Factor 1, 14 of the original 15 loaded the same; on Factor 2, eight of the original 13 loaded the same; and on Factor 3, 12 or the original 13 loaded the same. The original instrument's first three factors accounted for 69 percent of the variance, while in this study the first three factors accounted for 37 percent of the variance. The other items and those items from the last two factors of the original survey instrument were scattered in the remaining four factors or found in Factors 1, 2, or 3. Since the original researchers chose to retain the items in more than one factor, some items from the factor analysis done for this study can be found in more than one factor of the original.

Through the process of factor analysis, an instrument's construct validity can be assessed (Kerlinger, 1986). Those items which load on a particular factor have common-factor variance or they share a common idea or trait. Retaining an item in only the factor in which it has the highest loading assures that the factors are measuring more precisely the common trait, or in this case attitude. The percent of variance accounted for in this instrument was .44. That Factors 1, 2, and 3 loaded similarly assures that there is an underlying variable which is being successfully measured (Kerlinger, 1986). A higher percentage of accounted for variance, however, is desirable and this must be considered.

Concerning factor names, Kerlinger (1986) stated, "Factor names are simply attempts to epitomize the essence of factors. They are always tentative, subject to later confirmation or disconfirmation" (p. 591). The names of the first three factors have been retained

from the original instrument because of the high similarity between loading. The last five factors were named by this researcher in an attempt to "epitomize the essence of the factors."

Confidence in this instrument can be gained from the large and diverse sample size which was accrued, from the similar loading of items from the original instrument to this instrument, from the construct validity which was tested prior to mailing, and by the clustering of new items, i.e., factors dealing specifically with principals, students, and parents in factors which matched the intent of the researcher.

Method of Organizing Data

The data from each survey instrument were machine scanned and the data compiled in the data bank followed by analysis through use of the SPSS-X program. Appropriate tables were constructed to show the relationship between the dependent and independent variables. Appropriate tables depicting the results of the multiple regression model, the one-way analysis of variance model, and the two-way analysis of variance model follow in Chapter 4.

Graphs were plotted to show the patterns of means generated from teachers' attitudes toward the independent variables over their years of experience when they were shown to be significantly different (see Appendix A).

Research Questions and Statistical Hypotheses

To achieve the purpose of this study and to answer the questions of the study, the hypotheses which follow were tested at the .05 level. The independent variables are as follows: number of years of experience, marital status, children or no children, gender, district size, education level, and teaching level. The dependent variables are as follows: attitude toward teaching as an occupation, attitude toward teaching skills, attitude toward frustrations of teaching, attitude toward relationships with supervisors and students, attitude toward students and classroom climate, attitude toward parents and students, attitude toward professional responsibilities, and attitude toward internal and external pressures of teaching.

Statistical Hypotheses Tested by One-Way Analysis of Variance

Null Hypotheses 1.1-1.8. There is no significant difference between the means for gender on the dependent variable of attitude.

Null Hypotheses 2.1-2.8. There is no significant difference between the means for married/unmarried teachers on the dependent variable of attitude.

Null Hypotheses 3.1-3.8. There is no significant difference between the means for teaching levels on the dependent variable of attitude.

Null Hypotheses 4.1-4.8. There is no significant difference between the means for levels of education on the dependent variable of attitude.

Null Hypotheses 5.1-5.8. There is no significant difference between the means for teachers with/without children on the dependent variable of attitude.

Null Hypotheses 6.1-6.8. There is no significant difference between the means for district size on the dependent variable of attitude.

Null Hypotheses 7.1-7.8. There is no significant difference between the means for interval experience levels on the dependent variable of attitude.

Statistical Hypotheses Tested by Two-Way Analysis of Variance

Null Hypothesis 8. There are no interactions between the independent variables of interval experience and all others on the dependent variables of attitude.

Statistical Hypotheses Tested by Multiple Regression Analysis

A multiple regression model which included all independent variables was run for each dependent variable. For example:

$$y_i = b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 = ... b_8x_8 + a$$

Null Hypothesis 9. The independent variables do not account for a significant portion of the variability seen in teachers' attitude toward teaching as an occupation.

Null Hypothesis 10. The independent variables do not account for a significant portion of the variability seen in teachers' attitude toward teaching skills.

Null Hypothesis 11. The independent variables do not account for a significant portion of the variability seen in teachers' attitude toward frustrations of teaching.

Null Hypothesis 12. The independent variables do not account for a significant portion of the variability seen in teachers' attitude toward relationships with supervisors.

Null Hypothesis 13. The independent variables do not account for a significant portion of the variability seen in teachers' attitude toward students and classroom climate.

Null Hypothesis 14. The independent variables do not account for a significant portion of the variability seen in teachers' attitude toward relationships with parents and students.

Null Hypothesis 15. The independent variables do not account for a significant portion of the variability seen in teachers' attitude toward professional responsibilities.

Null Hypothesis 16. The independent variables do not account for a significant portion of the variability seen in teachers' attitude toward internal and external pressures of teaching.

Analysis of Data

The data collected in this study were subjected to two statistical analyses: multiple regression and analysis of variance. Multiple regression was used to determine whether the independent variables account for a significant portion of the variability of the dependent variable(s). Kerlinger and Pedhauzer (1973) stated, "Multiple regression analysis is nicely suited to studying the influence of

several independent variables on a dependent variable" (p. 4). The regression models which yielded a statistically significant R at the .05 level were subjected to a stepwise analysis model to determine which variables contributed the most to, and order of, the variability of the dependent variables resulting in the largest R squared. The independent variables were selected in the order of their ability to contribute to the overall prediction. The stepwise procedure allowed the researcher to eliminate variables entered earlier whose contributions to the variability of the dependent variable(s) were explained by other independent variables, thereby identifying a model which is effective in prediction of teachers' attitudes.

The raw score weights for each regression model was tested to determine whether they were significantly different from zero. Hypotheses were tested to determine if a significant statistical difference existed between the raw score weights and zero when the other independent variables were taken into account. This enabled the researcher to determine which independent variables were contributing the most to the prediction of the dependent variables when the other variables were taken into account.

A one-way analysis of variance was used to determine if there was a significant difference between the means of selected pairs/groups of the independent variables. If a significant difference was found in those one-way analysis of variance models having three or more independent variables, a Newman-Kuels test was used to determine which means were significant. A two-way analysis of variance was conducted to determine if there was interaction between the paired/grouped

dependent variables (i.e., gender, marital status, district size, with/without children, education levels, teaching level, and years of experience) with the different measures of attitudes. When no interaction was found, the main effects were tested; if interaction was found, the type of interaction was determined. Disordinal interaction ended the analysis and ordinal interaction merited further analysis.

Precautions Taken for Accuracy

The use of mark-sense forms decreased the error rate which would have been possible with a key punching procedure. The SPSS-X program was used with appropriate subprograms. The Montana State University VAX computer system was used.

The adapted instrument used in this study was tested using the statistical procedure factor analysis. This was done to compare the results of the original instrument's factor loadings and variance totals to those of the adapted instrument in order to determine reliability.

Chapter 4 describes the results of the analysis of data with necessary tables and descriptions of the data.

CHAPTER 4

ANALYSIS OF DATA

The analysis of the data in this chapter will begin with a description of the sample population and response rate. Discussion of the procedures followed in designing the instrument will follow along with the results of the factor analysis. The tables and results of the one-way analysis of variance, the two-way analysis of variance, and the multiple regression findings are presented next in the chapter.

Population and Response Rate

Survey instruments were mailed to a proportional random sample of 1,890 K-12 teachers in Alaska, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington. A total of 32 of the mailed survey packets were undeliverable to the addresses obtained from the National Education Association in those states. This resulted in a decreased sample size of 1,858 individuals. The number of surveys which were returned to the researcher was 845, and 823 were delivered sufficiently complete to be used for analysis. The effect on shrinkage which resulted between the sought sample size of 900 and the actual sample size of 823 was .07 percent for the full model and .1 percent when validating using Moser. The percentage of return was .45.

The Instrument

A factor analysis was completed based upon N = 823. The initial factor analysis resulted in 16 factors whose eigenvalues were greater than 1.0 and accounted for 57 percent of the variance. Following rotation with the SPSS-X program set at eigenvalue 1.0, the recommended Kaiser cutoff at .30, and limiting the number of factors to eight resulted in 44percent of the variance being accounted for. These eight factors included 68 of the 70 questions. Table 1 shows the results of the factor analysis procedure.

Table 1. Results of the factor analysis.

Factor	Description	Factor Loading
1	Attitude Toward Teaching as an Occupation	
	*I reflect on my teaching career with pride.	.45369
	*I feel angry.	-.49312
	*Each year it becomes increasingly more difficult to be enthusiastic about teaching.	-.63406
	*I would be happier doing something other than teaching.	-.67779
	*I am frustrated.	-.55147
	I have a tremendous amount of energy.	.33275
	*I enjoy teaching and look forward to going to work each day.	.70232
	*I am generally optimistic about teaching.	.54438
	*I need a push to get me through the doldrums.	-.50779
	*I would like to teach part-time so I could pursue other interests.	-.42881
	I enjoy my students.	.50830
	*I love to teach.	.63293
	*I dread going to work.	-.68730

Table 1--continued.

Factor	Description	Factor Loading
	*My work is dull.	-.52362
	*I usually leave school with a sense of satisfaction.	.55090
	Percent of Variance:	18.8
2	Attitude Toward Teaching Skills	
	*It is exciting to decide what I'm going to teach.	.42346
	I enjoy sharing ideas with other teachers.	.49451
	I still have a lot to learn about teaching.	.49744
	I attend to students' individual needs.	.35216
	*I am learning about new technology.	.38087
	*I am building a store of materials and ideas.	.66080
	*I try to make each day better than the one before.	.51728
	*I look for ways to improve our school.	.45354
	I am gaining comfort and security through experience.	.35012
	*I am willing to try new ideas and teaching strategies.	.55669
	*My work is challenging.	.49586
	I am learning new things each day.	.54328
	*I strive to improve my teaching skills.	.61235
	Teachers should provide many opportunities to meet with parents.	.34217
	*I want to learn from other teachers.	.62154
	Percent of Variance:	7.8
3	Attitude Toward the Frustrations of Teaching	
	*Administration does not want to hear problems of teachers.	.68145

Table 1--continued.

Factor	Description	Factor Loading
	*The morale at my school is low.	.52158
	*There is not enough budgetary support to purchase instructional material.	.43728
	*The school bureaucracy frustrates me.	.71761
	*My superiors frustrate me.	.73656
	*There are few rewards for my professional efforts.	.49056
	I am concerned about the influence of special interest groups.	.35938
	Lack of public trust bothers me.	.41299
	*I question the competence of decision makers in my school district.	.68799
	*I feel I am not treated professionally.	.58239
	*The academic climate in my school is discouraging.	.46610
	My principal has the necessary expertise to evaluate me.	-.43133
	*Paperwork and non-teaching activities frustrate me.	.36035
	Percent of Variance:	3.7
4	Attitude Toward Relationships with Supervisors and Students	
	I am able to establish rapport with my students.	.34621
	My teaching situation is unstable.	-.36081
	My principal has confidence and trust in me as a teacher.	.74439
	I am respected by my supervisors.	.66377
	Being evaluated by my supervisor worries me.	-.42558
	I have a good working relationship with my principal.	.67795
	Percent of Variance:	3.3

Table 1--continued.

Factor	Description	Factor Loading
5	Attitude Toward Students and Classroom Climate	
	I am respected by my students.	.43060
	I utilize a variety of methods in my classroom.	.59689
	I am comfortable with most of what I teach.	.70161
	I enjoy seeing students respond positively to my teaching.	.64891
	I maintain appropriate class control.	.64559
	Percent of Variance:	2.9
6	Attitude Toward Relationships with Parents and Students	
	Graduate coursework has helped me as a teacher.	.32965
	Parents are apathetic and give little support.	.55209
	Parents are supportive of my teaching.	.50570
	School is not important to my students.	-.60408
	My students are very motivated to learn.	.62458
	Percent of Variance:	2.7
7	Attitude Toward Professional Responsibilities of Teachers	
	I am active in my professional organization.	.65980
	I make an effort to be involved in curriculum development.	.45534
	I believe professional journals should be read regularly.	.50517
	It is important for me to organize and make presentations at conferences.	.53998
	I always attend regional, national, or state teacher conventions.	.64768
	Percent of Variance:	2.4

Table 1--continued.

Factor	Description	Factor Loading
8	Attitude Toward Internal and External Pressures of Teaching	
	I enjoy my colleagues.	.37002
	Societal expectations are a concern to me.	.36651
	My pupils expect too much of me.	.41252
	Curriculum demands pressure me.	.45035
	Percent of Variance:	2.1

*Questions matching factors of original instrument.

One-Way Analysis of Variance

Hypotheses 1 through 7 were tested with a one-way analysis of variance using the .05 level of significance. The eight factors were Attitude Toward: (1) Teaching as an Occupation, (2) Teaching Skills, (3) Frustrations of Teaching, (4) Relationships with Supervisors and Students, (5) Students and Classroom Climate, (6) Relationships with Parents and Students, (7) Professional Responsibilities, and (8) Internal and External Pressures of Teaching. These factors were individually analyzed against the following independent variables: gender, marital status, teaching level, education level, teachers with/without children, district size, and interval experience levels. The results were as follows:

Hypotheses 1 through 7

Null Hypothesis 1.1. There is no significant difference between the means for gender on the dependent variable of Attitude Toward Teaching as an Occupation. Tables 2 and 3 depict the data.

Table 2. Results of one-way analysis of variance test on Attitude Toward Teaching as an Occupation by gender.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	17.1632	17.1632	.2326	.6297
Within Groups	783	57765.2903	73.7743		
Total	784	57782.4535			

Table 3. Means for Attitude Toward Teaching as an Occupation by gender.

Group	N	Mean
Male	274	48.0401
Female	511	47.7299
Total	785	47.8382

A comparison of the means for gender on Factor 1, Attitude Toward Teaching as an Occupation, yielded an F-ratio of .2326, with p=.6297, statistics that were not significant at the .05 level of significance. As a result of these findings, Null Hypothesis 1.1 was retained.

Null Hypothesis 1.2. There is no significant difference between the means for gender on the dependent variable of Attitude Toward Teaching Skills. Tables 4 and 5 depict the data.

A comparison of the means for gender on Factor 2, Attitude Toward Teaching Skills, resulted in an F-ratio of 1.8411 with p=.1752, statistics which were not significant at the .05 level of significance. As a result of these findings, Null Hypothesis 1.2 was retained.

Table 4. Results of one-way analysis of variance test on Attitude Toward Teaching Skills by gender.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	239.8030	239.8030	1.8411	.1752
Within Groups	785	102248.2605	130.2526		
Total	786	102488.0635			

Table 5. Means for Attitude Toward Teaching Skills by gender.

Group	N	Mean
Male	282	47.9433
Female	505	46.7921
Total	787	47.2046

Null Hypothesis 1.3. There is no significant difference between the means for gender on the dependent variable of Attitude Toward the Frustrations of Teaching. Tables 6 and 7 depict the data.

A comparison of means for gender on Factor 3, Attitude Toward Frustration of Teaching, resulted in an F-ratio of 1.2407, with p=.2657, statistics which were not significant at the .05 level of significance. As a result of these findings, Null Hypothesis 1.3 was retained.

Table 6. Results of one-way analysis of variance test on Attitude Toward Frustrations of Teaching by gender.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	74.4904	74.4904	1.2407	.2657
Within Groups	781	46891.6654	60.0405		
Total	782	46966.1558			

Table 7. Means for Attitude Toward Frustrations of Teaching by gender.

Group	N	Mean
Male	281	31.9466
Female	502	32.5896
Total	783	32.3589

Null Hypothesis 1.4. There is no significant difference between the means for gender on the dependent variable of Attitude Toward Relationships with Supervisors and Students. Tables 8 and 9 depict the data.

A comparison of the means for gender on Factor 4, Attitude Toward Relationships with Supervisors and Students, resulted in an F-ratio of 3.7743 with p=.0524, statistics which were not significant at the .05 level of significance. Based on these findings, Null Hypothesis 1.4 was retained.

Table 8. Results of one-way analysis of variance test on Attitude Toward Relationships with Supervisors and Students by gender.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	43.1330	43.1330	3.7743	.0524
Within Groups	797	9108.0985	11.4280		
Total	798	9151.2315			

Table 9. Means for Attitude Toward Relationships with Supervisor and Students by gender.

Group	N	Mean
Male	285	18.7088
Female	514	18.2237
Total	799	18.3967

Null Hypothesis 1.5. There is no significant difference between the means for gender on the dependent variable of Attitude Toward Students and Classroom Climate. Tables 10 and 11 depict the data.

Table 10. Results of one-way analysis of variance test on Attitude Toward Students and Classroom Climate by gender.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	163.4901	163.4901	7.7348	.0055*
Within Groups	796	16824.9372	21.1369		
Total	797	16988.4273			

*Statistically significant

Table 11. Means for Attitude Toward Students and Classroom Climate by gender.

Group	N	Mean
Male	285	17.3228
Female	513	16.3782
Total	798	16.7155

A comparison of the means for gender on Factor 5, Attitude Toward Students and Classroom Climate, yielded an F-ratio of 7.7348 with p=.0055, statistics which were significant at the .05 level of significance. Based on these findings, Null Hypothesis 1.5 was rejected. Male teachers had significantly more positive attitudes toward students and classroom climate than females.

Null Hypothesis 1.6. There is no significant difference between the means for gender on the dependent variable of Attitude Toward Relationships with Parents and Students. Tables 12 and 13 depict the data.

Table 12. Results of one-way analysis of variance test on Attitude Toward Relationships with Parents and Students by gender.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	100.0908	100.0908	10.4199	.0013*
Within Groups	792	7607.7782	9.6058		
Total	793	7707.8690			

*Statistically significant

Table 13. Means for Attitude Toward Relationships with Parents and Students by gender.

Group	N	Mean
Male	283	13.7420
Female	511	14.4834
Total	794	14.2191

A comparison of the means for gender on Factor 6, Attitude Toward Relationships with Parents and Students, resulted in an F-ratio of 1.04199 with p=.0013, statistics which were significant at the .05 level of significance. Based on these findings, Null Hypothesis 1.6 was rejected. Female teachers had significantly more positive attitudes toward relationships with parents and students than males.

Null Hypothesis 1.7. There is no significant difference between the means for gender on the dependent variable of Attitude Toward Professional Responsibilities of Teachers. Tables 14 and 15 depict the data.

A comparison of the means on Factor 7, Attitude Toward Professional Responsibilities, resulted in an F-ratio of .7645 with p=.3822, statistics which were not significant at the .05 level of significance. Based on these findings, Null Hypothesis 1.7 was retained.

Table 14. Results of one-way analysis of variance test on Attitude Toward Professional Responsibilities by gender.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	7.6050	7.6050	.7645	.3822
Within Groups	797	7927.8844	9.9472		
Total	798	7935.4894			

Table 15. Means for Attitude Toward Professional Responsibilities by gender.

Group	N	Mean
Male	285	13.3158
Female	514	13.5195
Total	799	13.4468

Null Hypothesis 1.8. There is no significant difference between the means for gender on the dependent variable of Attitude Toward Internal and External Pressures of Teaching. Tables 16 and 17 depict the data.

A comparison of the means for gender on Factor 8, Attitude Toward Internal and External Pressures of Teaching, resulted in an F-ratio of 5.2196 with p=.0226, statistics which were significant at the .05 level of significance. Based on these results, Null Hypothesis 1.8 was rejected. Male teachers had significantly more positive attitudes toward internal and external pressures of teaching than female teachers.

Table 16. Results of one-way analysis of variance test on Attitude Toward Internal and External Pressures of Teaching by gender.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	26.1794	26.1794	5.2196	.0226*
Within Groups	801	4017.4719	5.0156		
Total	802	4043.6513			

*Statistically significant

Table 17. Means for Attitude Toward Internal and External Pressures of Teaching by gender.

Group	N	Mean
Male	287	11.6481
Female	516	11.2713
Total	803	11.4060

The data presented in summary Table 18 indicate male and female teachers had significantly different means on three factors: Factor 5, Attitude Toward Students and Classroom Climate; Factor 6, Attitude Toward Relationships with Parents and Students; and Factor 8, Attitude Toward Internal and External Pressures of Teaching. On Factors 5 and 8, males had significantly higher mean scores, and on Factor 6, female teachers had significantly higher mean scores (refer to Tables 10, 11, 12, 13, 16 and 17).

Table 18. One-way analysis of variance summary on Factors 1-8 by gender.

Factors 1-8**	N	F	p
Factor 1	785	.2326	.6297
Factor 2	787	1.8411	.1752
Factor 3	783	1.2407	.2657
Factor 4	799	3.7743	.0524
Factor 5	798	7.7348	.0055*
Factor 6	794	10.4199	.0013*
Factor 7	799	.7645	.3822
Factor 8	803	5.2196	.0226*

*Statistically significant

**Factors 1-8 = Attitude Toward...

1. Teaching as an Occupation
2. Teaching Skills
3. Frustrations of Teaching
4. Relationships w/Supervisors & Students
5. Students & Classroom Climate
6. Relationships w/Parents & Students
7. Professional Responsibilities
8. Internal/External Pressures of Teaching

Null Hypothesis 2.1. There is no significant difference between the means for marital status on the dependent variable of Attitude Toward Teaching as an Occupation. Tables 19 and 20 depict the data.

Table 19. Results of one-way analysis of variance test on Attitude Toward Teaching as an Occupation by marital status.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	3	6674.8357	224.9452	3.0838	.0267*
Within Groups	773	56386.1527			
Total	776	57060.9884			

*Statistically significant

Table 20. Means for Attitude Toward Teaching as an Occupation by marital status.

Group	N	Mean
1 - Married	595	48.2790
2 - Unmarried	95	45.5053
3 - Divorced	78	47.7949
4 - Widowed	9	45.6667
Total	777	47.8610

A comparison of the means for marital status on Factor 1, Attitude Toward Teaching as an Occupation, yielded an F-ratio of 3.0838 with p=.0267, statistics which were significant at the .05 level of significance. Based on these results, Null Hypothesis 2.1 was rejected. The Newman-Kuels procedure denoted the pair of 1 (married) and 2 (unmarried) as the one which was significantly different. Married teachers had significantly higher means, thus more positive attitudes toward teaching as an occupation.

Null Hypothesis 2.2. There is no significant difference between the means for marital status on the dependent variable of Attitude Toward Teaching Skills. Tables 21 and 22 depict the data.

Table 21. Results of one-way analysis of variance test on Attitude Toward Teaching Skills by marital status.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	3	1161.2466	387.0822	2.9899	.0303*
Within Groups	775	100334.1116	129.4634		
Total	778	101495.3582			

*Statistically significant

Table 22. Means for Attitude Toward Teaching Skills by marital status.

Group	N	Mean
1 - Married	597	47.4439
2 - Unmarried	95	44.9053
3 - Divorced	78	48.9103
4 - Widowed	9	40.5556
Total	779	47.2015

A comparison of the means for marital status on Factor 2, Attitude Toward Teaching Skills, resulted in an F-ratio of 2.9899 with p=.0303, statistics that were significant at the .05 level of significance. Based on these findings, Null Hypothesis 2.2 was rejected. The Newman-Kuels procedure denoted a significant difference between pairs 1 (married) and 2 (unmarried). Married teachers had significantly more positive attitudes toward teaching skills than unmarried teachers.

Null Hypothesis 2.3. There is no significant difference between the means for marital status on the dependent variable of Attitude Toward Frustrations of Teaching. Tables 23 and 24 depict the data.

Table 23. Results of one-way analysis of variance test on Attitude Toward Frustrations of Teaching by marital status.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	3	93.2575	31.0858	.5188	.6694
Within Groups	774	46374.7476	59.9157		
Total	777	46468.0051			

Table 24. Means for Attitude Toward Frustrations of Teaching by marital status.

Group	N	Mean
1 - Married	598	32.3579
2 - Unmarried	93	31.5269
3 - Divorced	77	32.5065
4 - Widowed	10	34.1000
Total	778	32.2956

A comparison of the means for marital status on Factor 3, Attitude Toward Frustrations of Teaching, resulted in an F-ratio of .5188 with p=.6694, statistics that were not significant at the .05 level of significance. Based on these findings, Null Hypothesis 2.3 was retained.

Null Hypothesis 2.4. There is no significant difference between the means for marital status on the dependent variable of Attitude Toward Relationships with Supervisors and Students. Tables 25 and 26 depict the results.

Table 25. Results of one-way analysis of variance test on Attitude Toward Relationships with Supervisors and Students by marital status.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	3	108.7578	36.2526	3.1968	.0229*
Within Groups	788	8936.2308	11.3404		
Total	791	9044.9886			

*Statistically significant

Table 26. Means for Attitude Toward Relationships with Supervisors and Students by marital status.

Group	N	Mean
1 - Married	610	18.4525
2 - Unmarried	95	17.6316
3 - Divorced	78	19.1923
4 - Widowed	9	17.8889
Total	792	18.4205

A comparison of the means for marital status on Factor 4, Attitude Toward Relationships with Supervisors and Students, resulted in an F-ratio of 3.1968 with p=.0229, statistics which were significant at the .05 level of significance. Based on these findings, Null Hypothesis 2.4 was rejected. The Newman-Kuels post hoc procedure denoted a significant difference between groups 2 (unmarried) and 3 (divorced). Divorced teachers had significantly more positive attitudes toward relationships with supervisors and students than unmarried teachers.

Null Hypothesis 2.5. There is no significant difference between the means for marital status on the dependent variable of Attitude

Toward Students and Classroom Climate. Tables 27 and 28 depict the data.

Table 27. Results of one-way analysis of variance test on Attitude Toward Students and Classroom Climate by marital status.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	p
Between Groups	3	126.3581	42.1194	1.9990	.1127
Within Groups	787	16582.4712	21.0705		
Total	790	16708.8293			

Table 28. Means for Attitude Toward Students and Classroom Climate by marital status.

Group	N	Mean
1 - Married	609	16.7816
2 - Unmarried	95	15.9158
3 - Divorced	77	17.5455
4 - Widowed	10	15.7000
Total	791	16.7383

A comparison of the means for marital status on Factor 5, Attitude Toward Students and Classroom Climate, yielded an F-ratio of 1.9990 and p=.1127, statistics which were not significant at the .05 level of significance. Based on these findings, Null Hypothesis 2.5 was retained.

Null Hypothesis 2.6. There is no significant difference between the means for marital status on the dependent variable of Attitude Toward Relationship with Parents and Students. Tables 29 and 30 depict the data.

Table 29. Results of one-way analysis of variance test on Attitude Toward Relationships with Parents and Students by marital status.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	3	41.0350	13.6783	1.4132	.2376
Within Groups	782	7569.0019	9.6790		
Total	785	7610.0369			

Table 30. Means for Attitude Toward Relationships with Parents and Students by marital status.

Group	N	Mean
1 - Married	606	14.2987
2 - Unmarried	93	13.6237
3 - Divorced	78	14.2692
4 - Widowed	9	14.8889
Total	786	14.2226

A comparison of the means for marital status on Factor 6, Attitude Toward Relationships with Parents and Students, yielded an F-ratio of 1.4132 and p=.2376, statistics which were not significant at the .05 level of significance. Based on these findings, Null Hypothesis 2.6 was retained.

Null Hypothesis 2.7. There is no significant difference between the means for marital status on the dependent variable of Attitude Toward Professional Responsibilities of Teachers. Tables 31 and 32 depict the data.

A comparison of the means for marital status on Factor 7, Attitude Toward Professional Responsibilities, resulted in an F-ratio of .6752

and p=.5674, statistics which were not significant at the .05 level of significance. Based on these results, Null Hypothesis 2.7 was retained.

Table 31. Results of one-way analysis of variance test on Attitude Toward Professional Responsibilities by marital status.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	3	20.0215	6.6738	.6752	.5674
Within Groups	787	7779.2529	9.8847		
Total	790	7799.2743			

Table 32. Means for Attitude Toward Professional Responsibilities by marital status.

Group	N	Mean
1 - Married	611	13.4255
2 - Unmarried	94	13.2021
3 - Divorced	76	13.7895
4 - Widowed	10	12.7000
Total	791	13.4248

Null Hypothesis 2.8. There is no significant difference between the means for marital status on the dependent variable of Attitude Toward Internal and External Pressures of Teaching. Tables 33 and 34 depict the data.

A comparison of the means for marital status on Factor 8, Attitude Toward Internal and External Pressures of Teaching, resulted in an F-ratio of .6903 and p=.5581, statistics which were not significant at

the .05 level of significance. Based on these findings, Null Hypothesis 2.8 was retained.

Table 33. Results of one-way analysis of variance test on Attitude Toward Internal and External Pressures of Teaching by marital status.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	3	10.4317	3.4772	.6903	.5581
Within Groups	793	3994.6875	5.0374		
Total	796	4005.1192			

Table 34. Means for Attitude Toward Internal and External Pressures of Teaching by marital status.

Group	N	Mean
1 - Married	612	11.3889
2 - Unmarried	96	11.2083
3 - Divorced	80	11.6875
4 - Widowed	9	11.5556
Total	797	11.3990

The data represented in summary Table 35 indicate a significant difference was found on Factors 1, 2 and 4 between teachers of different marital status. The significant difference occurred between married and unmarried teachers on Factor 1, Attitude Toward Teaching as an Occupation (see Tables 19 and 20). Factor 2, Attitude Toward Teaching Skills, also indicated a significant difference between the married and unmarried groups (see Tables 21 and 22). The significant difference on Factor 4, Attitude Toward Relationships with Supervisors and Students, occurred between the unmarried and divorced groups (see

Tables 25 and 26). In the three factors which were significant, the unmarried group had significantly lower means.

Table 35. One-way analysis of variance summary on Factors 1-8 by marital status.

Factors 1-8**	N	F	p
Factor 1	777	3.0838	.0267*
Factor 2	779	2.9899	.0303*
Factor 3	778	.5188	.6694
Factor 4	792	3.1968	.0229*
Factor 5	791	1.9990	.1127
Factor 6	786	1.4132	.2376
Factor 7	791	.6752	.5674
Factor 8	797	.6903	.5581

*Statistically significant

**Factors 1-8 = Attitude Toward...

1. Teaching as an Occupation
2. Teaching Skills
3. Frustrations of Teaching
4. Relationships w/Supervisors & Students
5. Students & Classroom Climate
6. Relationships w/Parents & Students
7. Professional Responsibilities
8. Internal/External Pressures of Teaching

Null Hypothesis 3.1. There is no significant difference between the means for teaching level on the dependent variable of Attitude Toward Teaching as an Occupation. Tables 36 and 37 depict the data.

A comparison of means for teaching level on Factor 1, Attitude Toward Teaching as an Occupation, yielded an F-ratio of 3.8690 with p=.0093, statistics which were significant at the .05 level of significance. Based on these findings, Null Hypothesis 3.1 was rejected. The Newman-Kuels procedure denoted the pair of 1 (K-6) and 3 (9-12) as the one which was significantly different. K-6 teachers had more positive attitudes toward teaching as an occupation than high school teachers.

Table 36. Results of one-way analysis of variance test on Attitude Toward Teaching as an Occupation by teaching level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	3	720.7812	240.2604	3.8690	.0093*
Within Groups	574	35644.2915	62.0981		
Total	577	36365.0727			

*Statistically significant

Table 37. Means for Attitude Toward Teaching as an Occupation by teaching level.

Group	N	Mean
1 - Elementary (K-6)	269	50.8848
2 - Junior High (7-8)	89	49.0337
3 - High School (9-12)	153	48.3072
4 - Specialists	67	49.3582
Total	578	49.7405

Null Hypothesis 3.2. There is no significant difference between the means for teaching level on the dependent variable of Attitude Toward Teaching Skills. Tables 38 and 39 depict the data.

Table 38. Results of one-way analysis of variance test on Attitude Toward Teaching Skills by teaching level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	3	646.6097	215.5366	7.4499	.0001*
Within Groups	576	16664.5817	28.9316		
Total	579	17311.1914			

*Statistically significant

Table 39. Means for Attitude Toward Teaching Skills by teaching level.

Group	N	Mean
1 - Elementary (K-6)	265	52.3094
2 - Junior High (7-8)	90	50.4111
3 - High School (9-12)	156	50.0705
4 - Specialists	69	52.3623
Total	580	51.4190

A comparison of the means for teaching level on Factor 2, Attitude Toward Teaching Skills, resulted in an F-ratio of 7.4499 with p=.0001, statistics which were significant at the .05 level of significance. Based on these findings, Null Hypothesis 3.2 was rejected. The Newman-Kuels procedure denoted a significant difference between pairs 1 (K-6) and 3 (9-12), between 1 (K-6) and 2 (7-8), and between 3 (9-12) and 4 (specialists). Elementary teachers (K-6) had significantly more positive attitudes toward teaching skills than high school teachers (9-12) and junior high teachers (7-8). Specialists had significantly more positive attitudes toward teaching skills than high school teachers.

Null Hypothesis 3.3. There is no significant difference between the means for teaching level on the dependent variable of Attitude Toward Frustrations of Teaching. Tables 40 and 41 depict the data.

Table 40. Results of one-way analysis of variance test on Attitude Toward Frustrations of Teaching by teaching level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	3	618.0871	206.0290	3.5310	.0147*
Within Groups	572	33375.6195	58.3490		
Total	575	33993.7066			

*Statistically significant

Table 41. Means for Attitude Toward Frustrations of Teaching by teaching level.

Group	N	Mean
1 - Elementary (K-6)	268	33.4739
2 - Junior High (7-8)	88	33.3636
3 - High School (9-12)	155	31.3677
4 - Specialists	65	31.2000
Total	576	32.6337

A comparison of means for teaching level on Factor 3, Attitude Toward Frustrations of Teaching, resulted in an F-ratio of 3.5310 with p=.0147, statistics that were significant at the .05 level of significance. Based on these findings, Null Hypothesis 3.3 was rejected. The Newman-Kuels procedure identified the significant difference between group 1 (K-6) and group 3 (9-12). The significantly higher means of the elementary teachers (K-6) indicate less teaching frustration than the significantly lower means of the high school teachers (9-12).

Null Hypothesis 3.4. There is no significant difference between the means for teaching level on the dependent variable of Attitude Toward Relationships with Supervisors and Students. Tables 42 and 43 depict the data.

Table 42. Results of one-way analysis of variance test on Attitude Toward Relationships with Supervisors and Students by teaching level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	3	2.8503	.9501	.2010	.8957
Within Groups	581	2746.8762	4.7278		
Total	584	2749.7265			

Table 43. Means for Attitude Toward Relationships with Supervisors and Students by teaching level.

Group	N	Mean
1 - Elementary (K-6)	271	19.4649
2 - Junior High (7-8)	90	19.4333
3 - High School (9-12)	157	19.4204
4 - Specialists	67	19.6567
Total	585	19.4701

A comparison of means for teaching level on Factor 4, Attitude Toward Relationships with Supervisors and Students, resulted in an F-ratio of .2010 with p=.8957, statistics which were not significant at the .05 level of significance. Based on these results, Null Hypothesis 3.4 was retained.

Null Hypothesis 3.5. There is no significant difference between the means for teaching level on the dependent variable of Attitude Toward Students and Classroom Climate. Tables 44 and 45 depict the results.

Table 44. Results of one-way analysis of variance test on Attitude Toward Students and Classroom Climate by teaching level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	3	62.6525	20.8842	8.2542	.0000*
Within Groups	581	1470.0073	2.5301		
Total	584	1532.6598			

*Statistically significant

Table 45. Means for Attitude Toward Students and Classroom Climate by teaching level.

Group	N	Mean
1 - Elementary (K-6)	270	18.7778
2 - Junior High (7-8)	90	18.4444
3 - High School (9-12)	156	18.0577
4 - Specialists	69	18.9275
Total	585	18.5521

A comparison of means for teaching level on Factor 5, Attitude Toward Students and Classroom Climate, yielded an F-ratio of 8.2542 and p=.0000, statistics which were significant at the .05 level of significance. Based on these findings, Null Hypothesis 3.5 was rejected. The Newman-Kuels post hoc procedure denoted significant differences between group 1 (K-6) and group 3 (9-12) and between group 3 (9-12) and group 4 (specialists). Elementary (K-6) teachers had significantly more positive attitudes toward students and classroom climate than high school (9-12) teachers. The specialists also had significantly more positive attitudes toward this same factor than high school teachers.

Null Hypothesis 3.6. There is no significant difference between the means for teaching level on the dependent variable of Attitude Toward Relationship with Parents and Students. Tables 46 and 47 depict the data.

A comparison of means for teaching level on Factor 6, Attitude Toward Relationships with Parents and Students, yielded an F-ratio of 27.9407 and p=.0000, statistics that were significant at the .05 level

of significance. Based on these results, Null Hypothesis 3.6 was rejected. The significant differences between groups, as detailed by the Newman-Kuels procedure, were between group 3 (9-12) and group 4 (specialists), between group 1 (K-6) and group 3 (9-12), between group 4 (specialists) and group 2 (7-8), and between group 1 (K-6) and group 2 (7-8). Elementary (K-6) teachers had significantly more positive attitudes toward relationships with parents and students than high school (9-12) teachers and junior high (7-8) teachers. Specialists had significantly more positive attitudes on Factor 6 than junior high (7-8) and high school (9-12) teachers.

Table 46. Results of one-way analysis of variance test on Attitude Toward Relationships with Parents and Students by teaching level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	3	705.0036	235.0012	27.9407	.0000*
Within Groups	579	4869.8026	8.4102		
Total	582	5574.8062			

*Statistically significant

Table 47. Means for Attitude Toward Relationships with Parents and Students by teaching level.

Group	N	Mean
1 - Elementary (K-6)	269	15.6506
2 - Junior High (7-8)	90	13.5667
3 - High School (9-12)	157	13.3141
4 - Specialists	68	15.5294
Total	583	14.6895

Null Hypothesis 3.7. There is no significant difference between the means for teaching level on the dependent variable of Attitude Toward Professional Responsibilities of Teachers. Tables 48 and 49 depict the data.

Table 48. Results of one-way analysis of variance test on Attitude Toward Professional Responsibilities by teaching level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	3	13.9505	4.6502	.4750	.6998
Within Groups	583	5707.1091	9.7892		
Total	586	5721.0596			

Table 49. Means for Attitude Toward Professional Responsibilities by teaching level.

Group	N	Mean
1 - Elementary (K-6)	271	13.4391
2 - Junior High (7-8)	90	13.7222
3 - High School (9-12)	157	13.5096
4 - Specialists	69	13.8841
Total	587	13.5537

A comparison of means for teaching level on Factor 7, Attitude Toward Professional Responsibilities, resulted in an F-ratio of .4750 with p=.6998, statistics which were not significant at the .05 level. Based on these findings, Null Hypothesis 3.7 was retained.

Null Hypothesis 3.8. There is no significant difference between the means for teaching level on the dependent variable of Attitude Toward Internal and External Pressures of Teaching. Tables 50 and 51 depict the data.

A comparison of means for teaching level on Factor 8, Attitude Toward Internal and External Pressures of Teaching, resulted in an F-ratio of 1.3121 with p=.2695, statistics which were not significant at the .05 level of significance. Based on these findings, Null Hypothesis 3.8 was retained.

Table 50. Results of one-way analysis of variance test on Attitude Toward Internal and External Pressures of Teaching by teaching level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	3	16.0122	5.3374	1.3121	.2695
Within Groups	583	2371.4938	4.0677		
Total	586	2387.5060			

Table 51. Means for Attitude Toward Internal and External Pressures of Teaching by teaching level.

Group	N	Mean
1 - Elementary (K-6)	271	11.8118
2 - Junior High (7-8)	90	12.1889
3 - High School (9-12)	158	11.6772
4 - Specialists	68	11.9412
Total	587	11.8484

The data represented in summary Table 52 show a significant difference between teachers with different teaching assignments on Factors 1, 2, 3, 5 and 6. On Factor 1, Attitude Toward Teaching as an Occupation, the significant difference was between the elementary and high school teachers, with elementary teachers having significantly higher means (see Tables 36 and 37). On Factor 2, Attitude Toward

Teaching Skills, the significant difference was between elementary and high school teachers, between junior high and high school teachers, and between high school teachers and specialists (see Tables 38 and 39).

Table 52. One-way analysis of variance summary on Factors 1-8 by teaching level.

Factors 1-8**	N	F	p
Factor 1	578	3.8690	.0093*
Factor 2	580	7.4499	.0001*
Factor 3	576	3.5310	.0147*
Factor 4	585	.2010	.8957
Factor 5	585	8.2542	.0000*
Factor 6	583	27.9407	.0000*
Factor 7	587	.4750	.6998
Factor 8	587	1.3121	.2696

*Statistically significant

**Factors 1-8 = Attitude Toward...

1. Teaching as an Occupation
2. Teaching Skills
3. Frustrations of Teaching
4. Relationships w/Supervisors & Students
5. Students & Classroom Climate
6. Relationships w/Parents & Students
7. Professional Responsibilities
8. Internal/External Pressures of Teaching

On Factor 3, Attitude Toward Frustrations of Teaching, the elementary and high school groups showed significantly different means, with high school teachers having significantly lower means, therefore more frustration (see Tables 40 and 41). On Factor 5, Attitude Toward Students and Classroom Climate, the elementary teachers and specialists had the highest means, therefore less frustration with teaching (see Tables 44 and 45). Significant differences on Factor 6, Attitude Toward Relationships with Parents and Students, were found between high school teachers and specialists, between elementary and high school teachers, between junior high

teachers and specialists, and between elementary and junior high teachers. The specialists and elementary teachers had the highest means (see Tables 46 and 47).

Null Hypothesis 4.1. There is no significant difference between the means for education level on the dependent variable of Attitude Toward Teaching as an Occupation. Tables 53 and 54 depict the data.

Table 53. Results of one-way analysis of variance test on Attitude Toward Teaching as an Occupation by education level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	2	127.3222	63.6611	.8695	.4196
Within Groups	777	56889.8817	73.2174		
Total	779	57017.2038			

Table 54. Means for Attitude Toward Teaching as an Occupation by education level.

Group	N	Mean
1 - BS/BA-45	415	48.1060
2 - MS/MA-45	347	47.2911
3 - Specialist/Dr.	18	48.0556
Total	780	47.7423

A comparison of means for education level on Factor 1, Attitude Toward Teaching as an Occupation, yielded an F-ratio of .8695 with p=.4196, statistics which were not significant at the .05 level of significance. Based on these results, Null Hypothesis 4.1 was retained.

Null Hypothesis 4.2. There is no significant difference between the means for education level on the dependent variable of Attitude Toward Teaching Skills. Tables 55 and 56 depict the data.

Table 55. Results of one-way analysis of variance test on Attitude Toward Teaching Skills by education level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	2	116.4191	58.20950	.4425	.6426
Within Groups	778	102340.5899	131.54325		
Total	780	102457.0090			

Table 56. Means for Attitude Toward Teaching Skills by education level.

Group	N	Mean
1 - BS/BA-45	415	47.1205
2 - MS/MA-45	348	46.9511
3 - Specialist/Dr.	18	49.5556
Total	781	47.1012

A comparison of the means for education level on Factor 2, Attitude Toward Teaching Skills, resulted in an F-ratio of .4425 with p=.6426, statistics which were not significant at the .05 level of significance. Based on these results, Null Hypothesis 4.2 was retained.

Null Hypothesis 4.3. There is no significant difference between the means for education level on the dependent variable of Attitude Toward Frustrations of Teaching. Tables 57 and 58 depict the data.

A comparison of means for education level on Factor 3, Attitude Toward Frustrations of teaching, resulted in an F-ratio of .4187 with p=.6581, statistics which were not significant at the .05 level of significance. Based on these findings, Null Hypothesis 4.3 was retained.

Table 57. Results of one-way analysis of variance test on Attitude Toward Frustrations of Teaching by education level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	2	49.9266	24.9633	.4187	.6581
Within Groups	775	46206.6595	59.6215		
Total	777	46256.5861			

Table 58. Means for Attitude Toward Frustrations of Teaching by education level.

Group	N	Mean
1 - BS/BA-45	414	32.4686
2 - MS/MA-45	346	32.0549
3 - Specialist/Dr.	18	31.2778
Total	778	32.2571

Null Hypothesis 4.4. There is no significant difference between the means for education level on the dependent variable of Attitude Toward Relationships with Supervisors and Students. Tables 59 and 60 depict the data.

Table 59. Results of one-way analysis of variance test on Attitude Toward Relationships with Supervisors and Students by education level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	2	30.6837	15.3419	1.3279	.2656
Within Groups	792	9150.0660	11.5531		
Total	794	9180.7497			

Table 60. Means for Attitude Toward Relationships with Supervisors and Students by education level.

Group	N	Mean
1 - BS/BA-45	422	18.2322
2 - MS/MA-45	355	18.4761
3 - Specialist/Dr.	18	19.3889
Total	795	18.3673

A comparison of means for education level on Factor 4, Attitude Toward Relationships with Supervisors and Students, resulted in an F-ratio of 1.3279 with p=.2656, statistics which were not significant at the .05 level of significance. Based on these results, Null Hypothesis 4.4 was retained.

Null Hypothesis 4.5. There is no significant difference between the means for education level on the dependent variable of Attitude Toward Students and Classroom Climate. Tables 61 and 62 depict the data.

A comparison of means for education level on Factor 5, Attitude Toward Students and Classroom Climate, yielded an F-ratio of .7046 with p=.4946, statistics which were not significant at the .05 level of significance. Based on these findings, Null Hypothesis 4.5 was retained.

Table 61. Results of one-way analysis of variance test on Attitude Toward Students and Classroom Climate by education level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	2	30.3904	15.1952	.7046	.4946
Within Groups	791	17059.4244	21.5669		
Total	793	17089.8148			

Table 62. Means for Attitude Toward Students and Classroom Climate by education level.

Group	N	Mean
1 - BS/BA-45	422	16.5379
2 - MS/MA-45	354	16.7910
3 - Specialist/Dr.	18	17.6667
Total	794	16.6763

Null Hypothesis 4.6. There is no significant difference between the means for education level on the dependent variable of Attitude Toward Relationships with Parents and Students. Tables 63 and 64 depict the data.

Table 63. Results of one-way analysis of variance test on Attitude Toward Relationships with Parents and Students by education level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	2	32.4878	16.2439	1.6534	.1921
Within Groups	786	7721.9558	9.8244		
Total	788	7754.4436			

Table 64. Means for Attitude Toward Relationships with Parents and Students by education level.

Group	N	Mean
1 - BS/BA-45	418	14.1699
2 - MS/MA-45	353	14.1246
3 - Specialist/Dr.	18	15.5000
Total	789	14.1800

Null Hypothesis 4.7. There is no significant difference between the means for education level on the dependent variable of Attitude Toward Professional Responsibilities of Teachers. Tables 65 and 66 depict the data.

Table 65. Results of one-way analysis of variance test on Attitude Toward Professional Responsibilities of Teachers by education level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	2	27.4079	13.7040	1.3880	.2502
Within Groups	791	7809.5543	9.8730		
Total	793	7836.9622			

Table 66. Means for Attitude Toward Professional Responsibilities of Teachers by education level.

Group	N	Mean
1 - BS/BA-45	418	13.2823
2 - MS/MA-45	358	13.5698
3 - Specialist/Dr.	18	14.2220
Total	794	13.4332

A comparison of the means for education level on Factor 7, Attitude Toward Professional Responsibilities of Teachers, resulted in an F-ratio of 1.3880 with p=.2502, statistics which were not significant at the .05 level of significance. Based on these findings, Null Hypothesis 4.7 was retained.

Null Hypothesis 4.8. There is no significant difference between the means for education level on the dependent variables of Attitude

Toward Internal and External Pressures of Teaching. Tables 67 and 68 depict the data.

Table 67. Results of one-way analysis of variance test on Attitude Toward Internal and External Pressures of Teaching by education level.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	2	.3393	.1697	.0336	.9669
Within Groups	797	4021.6670	5.0460		
Total	799	4022.0000			

Table 68. Means for Attitude Toward Internal and External Pressures of Teaching on education level.

Group	N	Mean
1 - BS/BA-45	422	11.4194
2 - MS/MA-45	360	11.3778
3 - Specialist/Dr.	18	11.3889
Total	800	11.4000

A comparison of means for education level on Factor 8, Attitude Toward Internal and External Pressures of Teaching, resulted in an F-ratio of .1697 with p=.9669, statistics which were not significant at the .05 level. Based on these results, Null Hypothesis 4.8 was retained.

The data presented in summary Table 69 show no significant differences among teachers who have attained different levels of education.

Table 69. One-way analysis of variance summary on Factors 1-8 by education level.

Factors 1-8**	N	F	p
Factor 1	780	.8695	.4196
Factor 2	781	.4425	.6526
Factor 3	778	.4187	.6581
Factor 4	795	1.3279	.2656
Factor 5	794	.7046	.4946
Factor 6	789	1.6534	.1921
Factor 7	794	1.3880	.2502
Factor 8	800	.0336	.9669

**Factors 1-8 = Attitude Toward...

1. Teaching as an Occupation
2. Teaching Skills
3. Frustrations of Teaching
4. Relationships w/Supervisors & Students
5. Students & Classroom Climate
6. Relationships w/Parents & Students
7. Professional Responsibilities
8. Internal/External Pressures of Teaching

Null Hypothesis 5.1. There is no significant difference between the means for teachers with children/without children on the dependent variable of Attitude Toward Teaching as an Occupation. Tables 70 and 71 depict the data.

Table 70. Results of one-way analysis of variance test on Attitude Toward Teaching as an Occupation by teachers with or without children.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	399.2701	399.2701	5.4855	.0194*
Within Groups	726	52842.5705	72.7859		
Total	727	53241.8407			

*Statistically significant

Table 71. Means for Attitude Toward Teaching as an Occupation by teachers with or without children.

Group	N	Mean
1 - Without Children	187	46.5508
2 - With Children	541	48.2458
Total	728	47.8104

A comparison of means for teachers with or without children on Factor 1, Attitude Toward Teaching as an Occupation, yielded an F-ratio of 5.4855 with p=.0194, statistics which were significant at the .05 level of significance. Based on these findings, Null Hypothesis 5.1 was rejected. Teachers with children had significantly more positive attitudes toward teaching as an occupation than teachers without children.

Null Hypothesis 5.2. There is no significant difference between the means for teachers with or without children on the dependent variable of Attitude Toward Teaching Skills. Tables 72 and 73 depict the data.

Table 72. Results of one-way analysis of variance test on Attitude Toward Teaching Skills by teachers with or without children.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	119.7532	119.7532	.9237	.3368
Within Groups	727	94253.1302	129.6467		
Total	728	94372.8834			

A comparison of means for teachers with or without children on Factor 2, Attitude Toward Teaching Skills, resulted in an F-ratio of .9237 with p=.3368, statistics which were not significant at the .05

level of significance. Based on these findings, Null Hypothesis 5.2 was retained.

Table 73. Means for Attitude Toward Teaching Skills by teachers with or without children.

Group	N	Mean
1 - Without Children	189	46.5344
2 - With Children	540	47.4593
Total	729	47.2195

Null Hypothesis 5.3. There is no significant difference between the means for teachers with or without children on the dependent variable of Attitude Toward Frustrations of Teaching. Tables 74 and 75 depict the data.

Table 74. Results of one-way analysis of variance test on Attitude Toward Frustrations of Teaching by teachers with or without children.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	177.6862	177.6862	2.9668	.0854
Within Groups	725	43421.2134	59.8913		
Total	726	43598.8996			

Table 75. Means for Attitude Toward Frustrations of Teaching by teachers with or without children.

Group	N	Mean
1 - Without Children	187	31.4171
2 - With Children	540	32.5481
Total	727	32.2572

A comparison of means for teachers with or without children on Factor 3, Attitude Toward Frustrations of Teaching, resulted in an F-ratio of 2.9668 with p=.0854, statistics which were not significant at the .05 level of significance. Based on these results, Null Hypothesis 5.3 was retained.

Null Hypothesis 5.4. There is no significant difference between the means for teachers with or without children on the dependent variable of Attitude Toward Relationships with Supervisors and Students. Tables 76 and 77 depict the data.

Table 76. Results of one-way analysis of variance test on Attitude Toward Relationships with Supervisors and Students by teachers with or without children.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	47.1413	47.1413	4.1486	.0420*
Within Groups	739	8397.3635	11.3631		
Total	740	8444.5047			

*Statistically significant

Table 77. Means for Attitude Toward Relationships with Supervisors and Students by teachers with or without children.

Group	N	Mean
1 - Without Children	191	17.9634
2 - With Children	550	18.5400
Total	741	18.3914

A comparison of means for teachers with or without children on Factor 4, Attitude Toward Relationships with Supervisors and Students,

resulted in an F-ratio of 4.1486 with p=.0420, statistics which were significant at the .05 level of significance. Based on these results, Null Hypothesis 5.4 was rejected. Teachers with children had significantly more positive attitudes toward relationships with supervisors and students than teachers without children.

Null Hypothesis 5.5. There is no significant difference between the means for teachers with or without children on the dependent variable of Attitude Toward Students and Classroom Climate. Tables 78 and 79 depict the data.

Table 78. Results of one-way analysis of variance test on Attitude Toward Students and Classroom Climate by teachers with or without children.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	35.8875	35.8875	1.6939	.1935
Within Groups	738	15635.2530	21.1860		
Total	739	15671.1405			

Table 79. Means for Attitude Toward Students and Classroom Climate by teachers with or without children.

Group	N	Mean
1 - Without Children	190	16.3632
2 - With Children	550	16.8673
Total	740	16.7378

A comparison of means for teachers with or without children on Factor 5, Attitude Toward Students and Classroom Climate, yielded an F-ratio of 1.6939 with p=.1935, statistics which were not significant at

the .05 level. Based on these results, Null Hypothesis 5.5 was retained.

Null Hypothesis 5.6. There is no significant difference between the means for teachers with or without children on the dependent variable of Attitude Toward Relationships with Parents and Students. Tables 80 and 81 depict the data.

Table 80. Results of one-way analysis of variance test on Attitude Toward Relationships with Parents and Students by teachers with or without children.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	33.6260	33.6260	3.5085	.0615
Within Groups	733	7025.2257			
Total	734	7058.8517			

Table 81. Means for Attitude Toward Relationships with Parents and Students by teachers with or without children.

Group	N	Mean
1 - Without Children	187	13.8556
2 - With Children	548	14.3467
Total	735	14.2218

A comparison of means for teachers with or without children on Factor 6, Attitude Toward Relationships with Parents and Students, yielded an F-ratio of 3.5085 with p=.0615, statistics which were not significant at the .05 level. Based on these findings, Null Hypothesis 5.6 was retained.

Null Hypothesis 5.7. There is no significant difference between the means for teachers with or without children on the dependent

variable of Attitude Toward Professional Responsibilities of Teachers. Tables 82 and 83 depict the data.

Table 82. Results of one-way analysis of variance test on Attitude Toward Professional Responsibilities of Teachers by teachers with or without children.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	.1342	.1342	.0135	.9075
Within Groups	738	7328.6010	9.9304		
Total	739	7328.7351			

Table 83. Means for Attitude Toward Professional Responsibilities of Teachers by teachers with or without children.

Group	N	Mean
1 - Without Children	192	13.4583
2 - With Children	548	13.4891
Total	740	13.4811

A comparison of means for teachers with or without children on Factor 7, Attitude Toward Professional Responsibilities of Teachers, resulted in an F-ratio of .0135 with p=.9075, statistics which were not significant at the .05 level. Based on these results, Null Hypothesis 5.7 was retained.

Null Hypothesis 5.8. There is no significant difference between the means for teachers with or without children on the dependent variable of Attitude Toward Internal and External Pressures of Teaching. Tables 84 and 85 depict the data.

A comparison of means for teachers with or without children on Factor 8, Attitude Toward Internal and External Pressures of Teaching,

resulted in an F-ratio of 7.1577 with p=.0076, statistics which were significant at the .05 level of significance. Based on these findings, Null Hypothesis 5.8 was rejected. Teachers with children had significantly more positive attitudes toward internal and external pressures of teaching than teachers without children.

Table 84. Results of one-way analysis of variance test on Attitude Toward Internal and External Pressures of Teaching by teachers with or without children.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	1	35.3630	35.3630	7.1577	.0076*
Within Groups	745	3680.7334	4.9406		
Total	746	3716.0964			

*Statistically significant

Table 85. Means for Attitude Toward Internal and External Pressures of Teaching by teachers with or without children.

Group	N	Mean
1 - Without Children	196	11.0408
2 - With Children	551	11.5354
Total	747	11.4056

The data presented in summary Table 86 indicate there were significant differences found between teachers with or without children on three of the factors presented in this study. The factors which had significant differences were Factor 1, Attitudes of Teachers Toward Teaching as an Occupation; Factor 4, Attitudes Toward Supervisors and Students; and Factor 8, Attitudes Toward Internal and External

Pressures of Teaching. In all three factors, those teachers with children had higher means than those teachers without children (see Tables 70, 71, 76, 77, 84 and 85).

Table 86. One-way analysis of variance summary on Factors 1-8 by teachers with or without children.

Factors 1-8**	N	F	p
Factor 1	728	5.4855	.0194*
Factor 2	729	.9237	.3368
Factor 3	727	2.9668	.0854
Factor 4	741	4.1486	.0420*
Factor 5	740	1.6939	.1935
Factor 6	735	3.5085	.0615
Factor 7	740	.0135	.9075
Factor 8	747	7.1577	.0076*

*Statistically significant

**Factors 1-8 = Attitude Toward...

1. Teaching as an Occupation
2. Teaching Skills
3. Frustrations of Teaching
4. Relationships w/Supervisors & Students
5. Students & Classroom Climate
6. Relationships w/Parents & Students
7. Professional Responsibilities
8. Internal/External Pressures of Teaching

Null Hypothesis 6.1. There is no significant difference between the means for district size on the dependent variable of Attitude Toward Teaching as an Occupation. Tables 87 and 88 depict the data.

A comparison of means for district size on Factor 1, Attitude Toward Teaching as an Occupation, yielded an F-ratio of 1.0496 with p=.3806, statistics which were not significant at the .05 level of significance. Based on these results, Null Hypothesis 6.1 was retained.

Table 87. Results of one-way analysis of variance test on Attitude Toward Teaching as an Occupation by district size.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	4	304.8422	76.2105	1.0496	.3806
Within Groups	765	55545.4708	72.6085		
Total	769	55850.3132			

Table 88. Means for Attitude Toward Teaching as an Occupation by district size.

Group	District Size (No. Students)	N	Mean
1	1-999	125	48.5840
2	1000-1999	100	48.3000
3	2000-4999	174	48.6782
4	5000-9999	108	47.6389
5	10,000 and over	263	47.2205
Total		770	47.9701

Null Hypothesis 6.2. There is no significant difference between the means for district size on the dependent variable of Attitude Toward Teaching Skills. Tables 89 and 90 depict the data.

Table 89. Results of one-way analysis of variance test on Attitude Toward Teaching Skills by district size.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	4	2930.4238	732.6060	5.9052	.0001*
Within Groups	766	95030.0613	124.0601		
Total	770	97960.4851			

*Statistically significant

Table 90. Means for Attitude Toward Teaching Skills by district size.

Group	District Size (No. Students)	N	Mean
1	1-999	126	48.9921
2	1000-1999	102	48.5686
3	2000-4999	171	48.9825
4	5000-9999	109	48.5413
5	10,000 and over	263	44.7110
Total		771	47.4099

A comparison of means for district size on Factor 2, Attitude Toward Teaching Skills, resulted in an F-ratio of 5.9052 with p=.0001, statistics that were significant at the .05 level of significance. Based on these findings, Null Hypothesis 6.2 was rejected. The Newman-Kuels procedures indicated a significant difference between group 5 (10,000 and over students) and groups 1 (1-999 students), 2 (1000-1999 students), 3 (2000-4999 students), and 4 (5000-9999 students). Group 5 had the lowest means and therefore the least positive attitude toward teaching skills.

Null Hypothesis 6.3. There is no significant difference between the means for district size on the dependent variable of Attitude Toward Frustrations of Teaching. Tables 91 and 92 depict the data.

Table 91. Results of one-way analysis of variance test on Attitude Toward Frustrations of Teaching by district size.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	4	108.7211	27.1803	.4510	.7717
Within Groups	765	46100.7646	60.2624		
Total	769	46209.4857			

Table 92. Means for Attitude Toward Frustrations of Teaching by district size.

Group	District Size (No. Students)	N	Mean
1	1-999	122	31.8361
2	1000-1999	102	32.1078
3	2000-4999	173	32.1445
4	5000-9999	110	32.2545
5	10,000 and over	263	32.8365
Total		770	32.3429

A comparison of the means for district size on Factor 3, Attitude Toward Frustrations of Teaching, resulted in an F-ratio of .4510 with p=.7717, statistics which were not significant at the .05 level of significance. Based on these results, Null Hypothesis 6.3 was retained.

Null Hypothesis 6.4. There is no significant difference between the means for district size on the dependent variable of Attitude Toward Relationships with Supervisors and Students. Tables 93 and 94 depict the data.

Table 93. Results of one-way analysis of variance test on Attitude Toward Relationships with Supervisors and Students by district size.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	4	93.3442	23.3361	2.0660	.0835
Within Groups	780	8810.1513	11.2951		
Total	784	8903.4955			

Table 94. Means for Attitude Toward Relationships with Supervisors and Students by district size.

Group	District Size (No. Students)	N	Mean
1	1-999	125	18.4560
2	1000-1999	103	18.5437
3	2000-4999	177	18.9209
4	5000-9999	111	18.5946
5	10,000 and over	269	18.0149
Total		785	18.4408

A comparison of means for district size on Factor 4, Attitude Toward Relationships with Supervisors and Students, resulted in an F-ratio of 2.0660 with p=.0835, statistics which were not significant at the .05 level. Based on these results, Null Hypothesis 6.4 was retained.

Null Hypothesis 6.5. There is no significant difference between the means for district size on the dependent variable of Attitude Toward Students and Classroom Climate. Tables 95 and 96 depict the data.

Table 95. Results of one-way analysis of variance test on Attitude Toward Students and Classroom Climate by district size.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	4	330.3015	82.5754	4.0666	.0029*
Within Groups	779	15818.2291	20.3058		
Total	783	16148.5306			

*Statistically significant

Table 96. Means for Attitude Toward Students and Classroom Climate by district size.

Group	District Size (No. Students)	N	Mean
1	1-999	126	17.4286
2	1000-1999	102	16.9118
3	2000-4999	175	17.4914
4	5000-9999	112	16.9821
5	10,000 and over	269	15.9554
Total		784	16.8061

A comparison of means for district size on Factor 5, Attitude Toward Students and Classroom Climate, yielded an F-ratio of 4.0666 with p=.0029, statistics which were significant at the .05 level of significance. Based on these findings, Null Hypothesis 6.5 was rejected. The Newman-Kuels procedure denoted a difference between district size group 5 (10,000 and over students) and groups 1 (1-999 students) and 3 (2000-4999 students). Teachers in districts size 1 and 3 expressed more positive attitudes toward students and classroom climate than those in district size 5 (10,000 and over).

Null Hypothesis 6.6. There is no significant difference between the means for district size on the dependent variable of Attitude Toward Relationships with Parents and Students. Tables 97 and 98 depict the data.

A comparison of means for district size on Factor 6, Attitude Toward Relationships with Parents and Students, yielded an F-ratio of .8238 with p=.5101, statistics which were not significant at the .05 level of significance. Based on these findings, Null Hypothesis 6.6 was retained.

Table 97. Results of one-way analysis of variance test on Attitude Toward Relationships with Parents and Students by district size.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	4	31.9980	7.9995	.8238	.5101
Within Groups	772	7496.5735	9.7106		
Total	776	7528.5714			

Table 98. Means for Attitude Toward Relationships with Parents and Students by district size.

Group	District Size (No. Students)	N	Mean
1	1-999	124	13.9194
2	1000-1999	103	14.5243
3	2000-4999	178	14.4326
4	5000-9999	108	14.4630
5	10,000 and over	264	14.1932
Total		777	14.2857

Null Hypothesis 6.7. There is no significant difference between the means for district size and the dependent variable of Attitude Toward Professional Responsibilities of Teachers. Tables 99 and 100 depict the data.

A comparison of means for district size on Factor 7, Attitude Toward Professional Responsibilities of Teachers, resulted in an F-ratio of 3.6960 with p=.0055, statistics which were significant at the .05 level. Based on these results, Null Hypothesis 6.7 was rejected. The Newman-Kuels procedure indicated a significant difference between district group 5 (10,000 and over students) and group 1 (1-999 students), with group 1 teachers having the more positive attitudes.

Table 99. Results of one-way analysis of variance test on Attitude Toward Professional Responsibilities of Teachers by district size.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	4	144.3231	36.0808	3.6960	.0055*
Within Groups	778	7594.8365	9.7620		
Total	782	7739.1596			

*Statistically significant

Table 100. Means for Attitude Toward Professional Responsibilities of Teachers by district size.

Group	District Size (No. Students)	N	Mean
1	1-999	125	14.2880
2	1000-1999	103	13.7282
3	2000-4999	178	13.5281
4	5000-9999	112	13.2500
5	10,000 and over	265	13.0453
Total		783	13.4725

Null Hypothesis 6.8. There is no significant difference between the means for district size on the dependent variable of Attitude Toward Internal and External Pressures of Teaching. Tables 101 and 102 depict the data.

A comparison of means for district size on Factor 8, Attitude Toward Internal and External Pressures of Teaching, resulted in an F-ratio of 1.1205 and p=.3455, statistics which were not significant at the .05 level. Based on these results, Null Hypothesis 6.8 was retained. Teachers in district size 1 (1-999 students) had significantly more positive attitudes toward internal and external pressures of teaching than teachers in group 5 (10,000 and over).

Table 101. Results of one-way analysis of variance test on Attitude Toward Internal and External Pressures of Teaching by district size.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	4	22.3637	5.5909	1.1205	.3455
Within Groups	784	3911.9050	4.9897		
Total	788	3934.2687			

Table 102. Means for Attitude Toward Internal and External Pressures of Teaching by district size.

Group	District Size (No. Students)	N	Mean
1	1-999	126	11.5635
2	1000-1999	102	11.4608
3	2000-4999	178	11.4888
4	5000-9999	112	11.7054
5	10,000 and over	271	11.2288
Total		789	11.4385

The data presented in summary Table 103 show significant differences were found on Factor 2, Attitude Toward Teaching Skills, Factor 5, Attitude Toward Students and Classroom Climate, and on Factor 7, Attitude Toward Professional Responsibilities of Teachers. On Factor 2 the significant difference was between district size group 5 (10,000 and over students) and groups 1 (1-999 students), 2 (1000-1999 students), 3 (2000-4999 students), and 4 (5000-9999 students). District size group 5 had the lowest mean (see Tables 89 and 90). Analysis of the data for Factor 5 indicated a significant difference between district size group 5 (10,000 and over students) and groups 1

(1-999 students) and 3 (2000-4999 students). District size group 5 had the lowest means (see Tables 95 and 96). On Factor 7, the significant difference was between district size group 5 (10,000 and over students) and group 1 (1-999 students). District size group 1 had the highest means (see Tables 99 and 100).

Table 103. One-way analysis of variance summary on Factors 1-8 by district size.

Factors 1-8**	N	F	p
Factor 1	770	1.0496	.3806
Factor 2	771	5.9052	.0001*
Factor 3	770	.4510	.7717
Factor 4	785	2.0660	.0835
Factor 5	784	4.0666	.0029*
Factor 6	777	.8238	.5101
Factor 7	783	3.6960	.0055*
Factor 8	789	1.1205	.3455

*Statistically significant

**Factors 1-8 = Attitude Toward...

1. Teaching as an Occupation
2. Teaching Skills
3. Frustrations of Teaching
4. Relationships w/Supervisors & Students
5. Students & Classroom Climate
6. Relationships w/Parents & Students
7. Professional Responsibilities
8. Internal/External Pressures of Teaching

Null Hypothesis 7.1. There is no significant difference between the means for interval experience on the dependent variable of Attitude Toward Teaching as an Occupation. Tables 104 and 105 depict the data.

A comparison of means for interval experience on Factor 1, Attitude Toward Teaching as an Occupation, yielded an F-ratio of 1.1195 with p=.3486, statistics which were not significant at the .05 level of

significance. Based on these results, Null Hypothesis 7.1 was retained.

Table 104. Results of one-way analysis of variance test on Attitude Toward Teaching as an Occupation by interval experience.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	7	548.2954	78.3279	1.1195	.3486
Within Groups	738	51634.8306	69.9659		
Total	745	52183.1260			

Table 105. Means for Attitude Toward Teaching as an Occupation by interval experience.

Group	Interval Exp. (No. Years)	N	Mean
1	0-4	69	49.2899
2	5-9	121	49.5289
3	10-14	145	47.8966
4	15-19	154	47.3182
5	20-24	130	47.9538
6	25-29	94	47.2128
7	30-34	26	48.3846
8	35-39	7	50.0000
Total		746	48.1314

Null Hypothesis 7.2. There is no significant difference between the means for interval experience on the dependent variable of Attitude Toward Teaching Skills. Tables 106 and 107 depict the data.

A comparison of means for interval experience on Factor 2, Attitude Toward Teaching Skills, resulted in an F-ratio of 2.7091 with p=.0089, statistics which were significant at the .05 level of significance. Based on these results, Null Hypothesis 7.2 was

rejected. The significant difference denoted by the Newman-Kuels procedure was found between group 2 (5-9 years experience) and group 5 (20-24 years of experience). Teachers in group 2 had significantly more positive attitudes toward teaching skills than teachers in group 5.

Table 106. Results of one-way analysis of variance test on Attitude Toward Teaching Skills by interval experience.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	7	2176.2590	310.8941	2.7091	.0089*
Within Groups	737	84578.9142	114.7611		
Total	744	86755.1732			

*Statistically significant

Table 107. Means for Attitude Toward Teaching Skills by interval experience.

Group	Interval Exp. (No. Years)	N	Mean
1	0-4	70	46.1143
2	5-9	119	50.4118
3	10-14	144	49.2639
4	15-19	154	47.3701
5	20-24	130	46.3077
6	25-29	94	47.3085
7	30-34	26	43.6538
8	35-39	8	50.7500
Total		745	47.8174

Null Hypothesis 7.3. There is no significant difference between the means for interval experience on the dependent variable of Attitude Toward Frustrations of Teaching. Tables 108 and 109 depict the data.

Table 108. Results of one-way analysis of variance test on Attitude Toward Frustrations of Teaching by interval experience.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	7	1157.9545	165.4221	2.8774	.0057*
Within Groups	735	42254.5247	57.4891		
Total	742	43412.4791			

*Statistically significant

Table 109. Means for Attitude Toward Frustrations of Teaching by interval experience.

Group	Interval Exp. (No. Years)	N	Mean
1	0-4	71	34.9718
2	5-9	120	33.1750
3	10-14	142	31.7676
4	15-19	156	31.5513
5	20-24	128	31.1797
6	25-29	94	32.8723
7	30-34	25	33.2000
8	35-39	7	38.0000
Total		743	32.4011

A comparison of means for interval experience on Factor 3, Attitude Toward Frustrations of Teaching, resulted in an F-ratio of 2.8774 with p=.0057, statistics which were significant at the .05 level of significance. Based on these findings, Null Hypothesis 7.3 was rejected. The Newman-Kuels procedure indicated a significant difference between group 1 (0-4 years of experience) and groups 3 (10-14 years of experience), 4 (15-19 years of experience), and 5 (20-24 years of experience. Group 1 (0-4 years of experience) had

significantly higher means, thus lower frustration, than groups 3, 4 and 5.

Null Hypothesis 7.4. There is no significant difference between the means for interval experience on the dependent variable of Attitude Toward Relationships with Supervisors and Students. Tables 110 and 111 depict the data.

Table 110. Results of one-way analysis of variance test on Attitude Toward Relationships with Supervisors and Students by interval experience.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	7	121.2324	17.3189	1.6364	.1218
Within Groups	751	7948.0245	10.5833		
Total	758	8069.2569			

Table 111. Means for Attitude Toward Relationships with Supervisors and Students by interval experience.

Group	Interval Exp. (No. Years)	N	Mean
1	0-4	72	17.9861
2	5-9	121	18.6942
3	10-14	144	18.9931
4	15-19	160	18.3000
5	20-24	133	18.5338
6	25-29	96	18.6042
7	30-34	26	17.9231
8	35-39	7	21.1429
Total		759	18.5573

A comparison of means for interval experience on Factor 4, attitude Toward Relationships with Supervisors and Students, resulted in an F-ratio of 1.6364 with p=.1218, statistics which were not significant at the .05 level of significance. Based on these results, Null Hypothesis 7.4 was retained.

Null Hypothesis 7.5. There is no significant difference between the means for interval experience on the dependent variable of Attitude Toward Students and Classroom Climate. Tables 112 and 113 depict the data.

Table 112. Results of one-way analysis of variance test on Attitude Toward Students and Classroom Climate by interval experience.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	7	292.9837	41.8548	2.2288	.0302*
Within Groups	750	14084.5797	18.7794		
Total	757	14377.5633			

*Statistically significant

Table 113. Means for Attitude Toward Students and Classroom Climate by interval experience.

Group	Interval Exp. (No. Years)	N	Mean
1	0-4	70	15.7571
2	5-9	121	17.7521
3	10-14	146	17.5616
4	15-19	158	16.7722
5	20-24	131	16.7863
6	25-29	97	16.6907
7	30-34	27	15.7778
8	35-39	8	18.0000
Total		758	16.9565

A comparison of means for interval experience on Factor 5, Attitude Toward Students and Classroom Climate, yielded an F-ratio of 2.2288 with p=.0302, statistics which were significant at the .05 level of significance. Based on these results, Null Hypothesis 7.5 was rejected. The significant difference, as denoted by the Newman-Kuels procedure, was between group 1 (0-4 years of experience) and groups 2 (5-9 years of experience) and 3 (10-14 years of experience). Teachers in groups 2 and 3 had significantly higher means, thus more positive attitudes toward students and classroom climate, than group 1.

Null Hypothesis 7.6. There is no significant difference between the means for interval experience on the dependent variable of Attitude Toward Relationships with Parents and Students. Tables 114 and 115 depict the data.

A comparison of means for interval experience on Factor 6, Attitude Toward Relationships with Parents and Students, yielded an F-ratio of 1.3013 with p=.2467, statistics which were not significant at the .05 level of significance. Based on these findings, Null Hypothesis 7.6 was retained.

Table 114. Results of one-way analysis of variance test on Attitude Toward Relationships with Parents and Students by interval experience.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	7	87.8331	12.5476	1.3013	.2467
Within Groups	746	7193.2345	9.6424		
Total	753	7281.0676			

Table 115. Means for Attitude Toward Relationships with Parents and Students by interval experience.

Group	Interval Exp. (No. Years)	N	Mean
1	0-4	72	14.5278
2	5-9	120	14.9833
3	10-14	145	14.0690
4	15-19	157	14.1847
5	20-24	131	14.0534
6	25-29	94	14.1383
7	30-34	27	13.8889
8	35-39	8	13.6250
Total		754	14.2772

Null Hypothesis 7.7. There is no significant difference between the means for interval experience on the dependent variable of Attitude Toward Professional Responsibilities of Teachers. Tables 116 and 117 depict the data.

A comparison of means for interval experience on Factor 7, Attitude Toward Professional Responsibilities, resulted in an F-ratio of .8138 with p=.5759, statistics which were not significant at the .05 level of significance. Based on these results, Null Hypothesis 7.7 was retained.

Table 116. Results of one-way analysis of variance test on Attitude Toward Professional Responsibilities of Teachers by interval experience.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	7	56.9277	8.1325	.8138	.5759
Within Groups	749	7484.6813	9.9929		
Total	756	7541.6090			

Table 117. Means for Attitude Toward Professional Responsibilities of Teachers by interval experience.

Group	Interval Exp. (No. Years)	N	Mean
1	0-4	70	13.7143
2	5-9	121	13.0744
3	10-14	144	13.1389
4	15-19	159	13.6855
5	20-24	131	13.6336
6	25-29	98	13.4286
7	30-34	26	13.1154
8	35-39	8	14.2500
Total		757	13.4306

Null Hypothesis 7.8. There is no significant difference between the means for interval experience on the dependent variable of Attitude Toward Internal and External Pressures of Teaching. Tables 118 and 119 depict the data.

A comparison of means for interval experience on Factor 8, Attitude Toward Internal and External Pressures of Teaching, resulted in an F-ratio of 1.2577 and p=.2687, statistics which were not significant at the .05 level of significance. Based on these results, Null Hypothesis 7.8 was retained.

Table 118. Results of one-way analysis of variance test on Attitude Toward Internal and External Pressures of Teaching by interval experience.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Between Groups	7	42.1856	6.0265	1.2577	.2687
Within Groups	755	3617.8406	4.7918		
Total	762	3660.0262			

Table 119. Means for Attitude Toward Internal and External Pressures of Teaching by interval experience.

Group	Interval Exp. (No. Years)	N	Mean
1	0-4	71	11.0563
2	5-9	121	11.3802
3	10-14	145	11.5586
4	15-19	159	11.3711
5	20-24	135	11.7185
6	25-29	97	11.3814
7	30-34	27	11.7037
8	35-39	8	12.8750
Total		763	11.4692

The data presented in summary Table 120 show a significant difference was found between teachers at different interval experience levels on Factors 2, 3 and 5. On Factor 2, Attitude Toward Teaching Skills, the significant difference was found between teachers in group 2 (5-9 years experience) and those in group 5 (20-24 years experience). Teachers in group 2 (5-9 years experience) had a higher mean (see Table 107). The significant difference found in Factor 3, Attitude Toward Frustrations of Teaching, was between teachers in group 1 (0-4 years experience) and those in groups 3 (10-14 years experience), 4 (15-19 years experience), and 5 (20-24 years experience). The teachers in group 1 had higher means than those in groups 3, 4 and 5 (see Table 109). On Factor 5, Attitude Toward Students and Classroom Climate, significant differences were found between teachers in group 1 (0-4 years experience) and those in groups 2 (5-9 years experience) and 3 (10-14 years experience). Teachers in groups 2 and 3 had the higher means (see Table 113).

Table 120. One-way analysis of variance summary on Factors 1-8 by interval experience.

Factors 1-8**	N	F	p
Factor 1	746	1.1195	.3486
Factor 2	745	2.7091	.0089*
Factor 3	743	2.8774	.0057*
Factor 4	759	1.6364	.1218
Factor 5	758	2.2288	.0302*
Factor 6	754	1.3013	.2467
Factor 7	757	.8138	.5759
Factor 8	763	1.2577	.2687

*Statistically significant

**Factors 1-8 = Attitude Toward...

1. Teaching as an Occupation
2. Teaching Skills
3. Frustrations of Teaching
4. Relationships w/Supervisors & Students
5. Students & Classroom Climate
6. Relationships w/Parents & Students
7. Professional Responsibilities
8. Internal/External Pressures of Teaching

Two-Way Analysis of Variance

Hypothesis 8 was tested with a two-way analysis of variance using the .05 level of significance. The eight factors (Attitude Toward Teaching as an Occupation, Teaching Skills, Frustrations of Teaching, Relationships with Supervisors and Students, Students and Classroom Climate, Relationships with Parents and Students, Professional Responsibilities of Teachers, and Internal and External Pressures of Teaching) were paired with teacher interval experience levels and, in turn, with each of the other independent variables of gender, education level, district size, teaching level, marital status, and teachers with or without children.

Null Hypothesis 8. There are no interactions between the independent variables of interval experience and all others on the dependent variables of attitude.

The data presented in Table 121 show significant interaction (p=.00) occurred between teachers with or without children and interval

Table 121. Results of two-way analysis of variance test on Attitude Toward Frustrations of Teaching by teachers with/without children and interval experience.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Main Effects	8	1246.567	155.821	2.779	0.00*
Interval	7	1153.975	164.854	2.940	0.00*
W/WO Children	1	210.700	210.700	3.758	0.05*
Int. by Children	7	1342.064	191.723	3.419	0.00*
Within	666	37342.127	56.069		
Total	681	39930.758	58.635		

*Statistically significant

Table 122. Means for Attitude Toward Frustrations of Teaching by teachers with/without children and interval experience.

Interval Experience	Without Children		With Children		Total	
	N	Mean	N	Mean	N	Mean
1 (0-4)	27	34.81	42	35.07	69	34.97
2 (5-9)	42	33.31	70	33.07	112	33.16
3 (10-14)	36	28.14	97	32.87	133	31.59
4 (15-19)	31	32.33	116	31.51	147	31.66
5 (20-24)	17	27.82	96	31.61	113	31.04
6 (25-29)	11	31.09	69	33.04	80	32.78
7 (30-34)	5	40.40	17	30.53	22	32.77
8 (35-39)	2	26.50	4	42.25	6	37.00
Total	171	31.70	511	32.55	682	32.34

experience with regard to the dependent variable, Factor 3, Attitude Toward Frustrations of Teaching. Based on these findings, Null

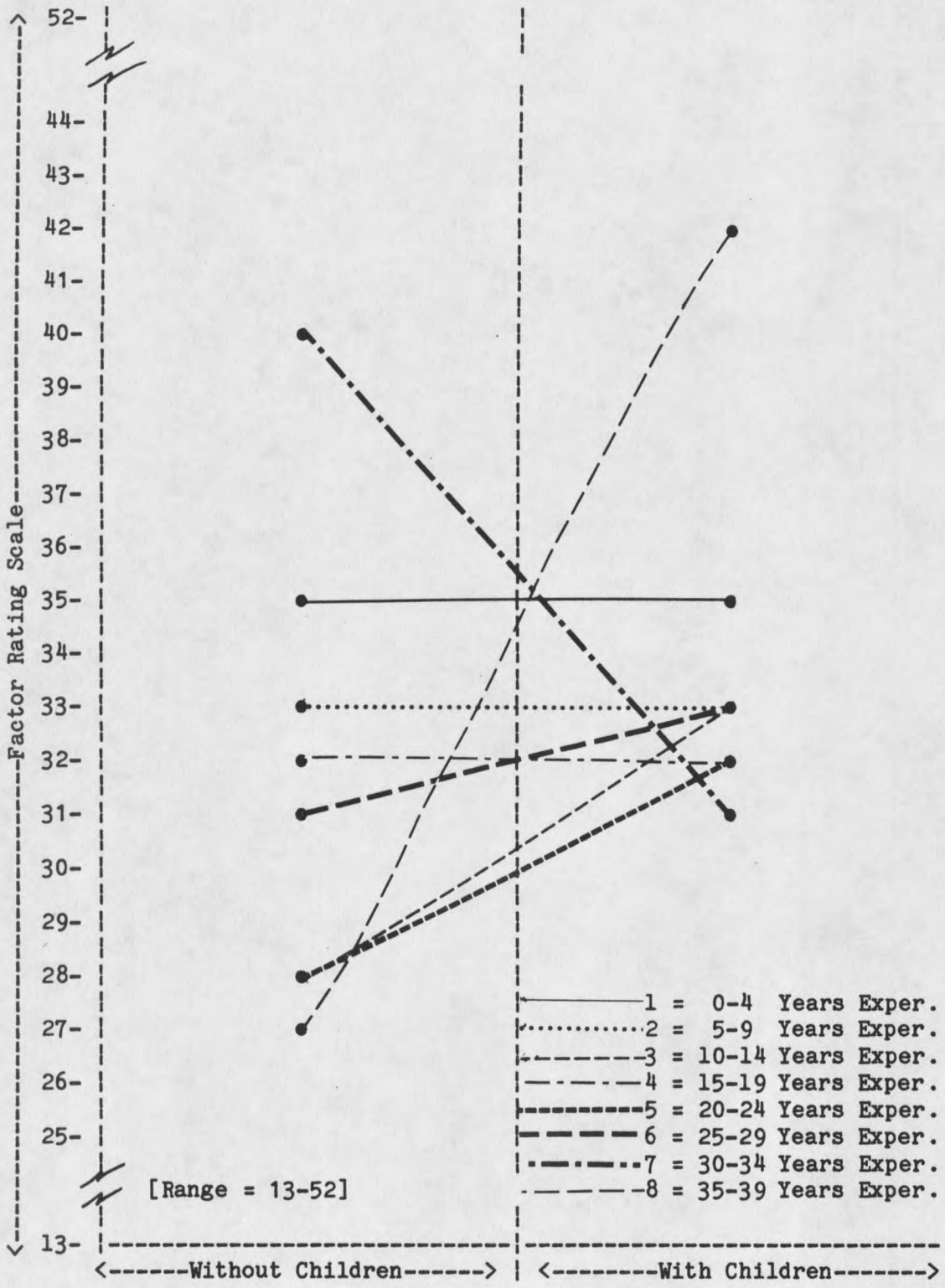


Figure 1. Interaction of teachers with/without children and interval experience on Attitude Toward Frustrations of Teaching.

Hypothesis 8 was rejected (refer to Figure 1). Table 122 depicts the mean data and the areas of significant difference.

Multiple Regression Analysis

Multiple regression analysis was used to test Hypotheses 9 through 16. This analysis tested all independent variables, gender, education level, district size, teaching level, marital status, and teachers with or without children against each of the eight factors. The purpose of this analysis was to predict the characteristics of teachers which significantly influence their attitudes towards the different topics of each factor. The following tables indicate the unique contribution of each of the independent variables in relation to the factors involved. The significance level of .05 was used in this analysis.

Hypotheses 9 through 16

Null Hypothesis 9. The independent variables do not account for a significant portion of the variability seen in Attitude Toward Teaching as an Occupation.

Inspection of the data in Tables 123 and 124 indicates significance at or below the .05 level for a relationship between the independent variables and Factor 1, Attitude Toward Teaching as an Occupation. The magnitude of the variability which has been accounted for is R^2 equal to .0328. Upon adjustment for shrinkage, the adjusted R^2 was equal to .02012. A stepwise regression was done with this data and is reported in Table 125. This table shows that the independent variables of teaching level and teachers with or without children each

account for a significant portion of the variability seen in the dependent variable. Based on these findings, Null Hypothesis 9 was rejected as the independent variables accounted for a significant portion of the variability seen in Factor 1.

Table 123. Analysis of variance regression for Attitude Toward Teaching as an Occupation.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Regression	7	1305.167	186.452	2.5593	.0123*
Residual	536	38545.125	71.913		

*Statistically significant

Table 124. Multiple regression analysis for Attitude Toward Teaching as an Occupation by independent variables.

Variable	B (Raw Score)	Beta	T	p
Marital Status	-.2646	-.0219	-.490	.6242
Education Level	-.0499	-.0127	-.284	.7767
District Size	-.3187	-.0544	-1.264	.2066
Interval Level	-.3999	-.0779	-1.757	.0795
Teaching Level	-.9272	-.1184	-2.678	.0076*
Gender	-.6647	-.0372	-.831	.4063
W/WO Children	1.8185	-.0931	2.073	.0387*

*Statistically significant

Table 125. Summary of stepwise procedure for Attitude Toward Teaching as an Occupation.

Step	Variable	Multiple R	R^2	F	p
1	Teaching Level	.1155	.0133	7.328	.007
2	W/WO Children	.1439	.0207	5.719	.003

Null Hypothesis 10. The independent variables do not account for a significant portion of the variability seen in Attitude Toward Teaching Skills.

Inspection of the data in Tables 126 and 127 indicates significance at or below the .05 level for a relationship between the independent variables and Factor 2, Attitude Toward Teaching Skills. The magnitude of the variability which has been accounted for is R^2 equal to .04082. Upon adjustment for shrinkage, the adjusted R^2 was equal to .02829. A stepwise regression was done with this data and is

Table 126. Analysis of variance regression for Attitude Toward Teaching Skills.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Regression	7	2904.881	414.983	3.25863	.0021*
Residual	536	68259.081	127.349		

*Statistically significant

Table 127. Multiple regression analysis for Attitude Toward Teaching Skills by independent variables.

Variable	B (Raw Score)	Beta	T	p
Marital Status	.3082	.0191	.429	.6682
Education Level	.2225	.0422	.949	.3428
District Size	-1.0728	-.1370	-3.198	.0015*
Interval Level	-.6014	-.0877	-1.986	.0476*
Teaching Level	-1.1744	-.1122	-2.549	.0111*
Gender	-1.5118	-.0632	-1.420	.1561
W/WO Children	-1.2458	.0472	1.067	.2864

*Statistically significant

reported in Table 128. This table shows that the independent variables of district size and teaching level each account for a significant portion of the variability seen in the dependent variable. Based on these findings, Null Hypothesis 10 was rejected as the independent variables accounted for a significant portion of the variability seen in Factor 2.

Table 128. Summary of stepwise procedure for Attitude Toward Teaching Skills.

Step	Variable	Multiple R	R^2	F	p
1	District Size	.1420	.0202	11.152	.001*
2	Teaching Level	.1689	.0285	7.938	.000*

*Statistically significant

Null Hypothesis 11. The independent variables do not account for a significant portion of the variability seen in Attitude Toward Frustrations of Teaching.

Inspection of the data in Tables 129 and 130 indicates significance at or below the .05 level for a relationship between the independent variables and Factor 3, Attitude Toward Frustrations of Teaching. The magnitude of the variability which has been accounted for is R^2 equal to .02714. Upon adjustment for shrinkage, the adjusted R^2 was equal to .01443. A stepwise regression was done with these data and is reported in Table 131. This table shows that the independent variable of teaching level accounts for a significant portion of the variability seen in the dependent variables. Based on these findings,

Null Hypothesis 11 was rejected as the independent variables accounted for a significant portion of the variability seen in Factor 3.

Table 129. Analysis of variance regression for Attitude Toward Frustrations of Teaching.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Regression	7	888.14712	126.16387	2.13574	.0385*
Residual	536	31662.98342	59.07273		

*Statistically significant.

Table 130. Multiple regression analysis for Attitude Toward Frustrations of Teaching by independent variables.

Variable	B (Raw Score)	Beta	T	p
Marital Status	.2876	.0263	.588	.5569
Education Level	-.0201	-.0056	-.126	.9000
District Size	.2493	.0471	1.091	.2756
Interval Level	-.3223	-.0695	-1.562	.1188
Teaching Level	-.8730	-.1233	-2.782	.0056*
Gender	.0997	.0062	.138	.8906
W/WO Children	1.4571	.0826	1.832	.0675

*Statistically significant

Table 131. Summary of stepwise procedure for Attitude Toward Frustrations of Teaching.

Step	Variable	Multiple R	R^2	F	p
1	Teaching Level	.1262	.0159	8.769	.003*

*Statistically significant

Null Hypothesis 12. The independent variables do not account for a significant portion of the variability seen in Attitude Toward Relationships with Supervisors and Students.

Inspection of the data in Tables 132 and 133 indicates no significance at or below the .05 level for a relationship between the independent variables and Factor 4, Attitude Toward Relationships with Supervisors and Students. The magnitude of the variability which has been accounted for is R^2 equal to .01660. Upon adjustment for shrinkage, the adjusted R^2 was equal to .00376. A stepwise regression was done with this data and no independent variable was significant. Based on these findings, Null Hypothesis 12 was retained.

Table 132. Analysis of variance regression for Attitude Toward Relationships with Supervisors and Students.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Regression	7	103.75949	14.82278	1.29255	.2516
Residual	536	6146.78961	11.46789		

Table 133. Multiple regression analysis for Attitude Toward Relationships with Supervisors and Students by independent variables.

Variable	B (Raw Score)	Beta	T	p
Marital Status	.2462	.0515	1.142	.2540
Education Level	.0667	.0427	.948	.3435
District Size	-.1451	-.0626	-1.442	.1499
Interval Level	-.0286	-.0141	-.315	.7528
Teaching Level	-.0255	-.0082	-.185	.8536
Gender	-.4254	-.0600	-1.332	.1835
W/WO Children	.6286	.0813	1.794	.0734

Null Hypothesis 13. The independent variables do not account for a significant portion of the variability seen in Attitude Toward Students and Classroom Climate.

Inspection of the data in Tables 134 and 135 indicates significance at or below the .05 level for a relationship between the independent variables and Factor 5, Attitude Toward Students and Classroom Climate. The magnitude of the variability which has been accounted for is R^2 equal to .04113. Upon adjustment for shrinkage, the adjusted R^2 was equal to .02861. A stepwise regression was done with this data and is reported in Table 136. This table shows that the

Table 134. Analysis of variance regression for Attitude Toward Students and Classroom Climate.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Regression	7	479.56789	68.50970	3.28454	.0020*
Residual	536	11180.00589	20.85822		

*Statistically significant

Table 135. Multiple regression analysis for Attitude Toward Students and Classroom Climate by independent variables.

Variable	B (Raw Score)	Beta	T	p
Marital Status	.3368	.0516	1.158	.2472
Education Level	.1237	.0580	1.305	.1926
District Size	-.3617	-.1141	-2.664	.0079*
Interval Level	-.1609	-.0579	-1.312	.1900
Teaching Level	-.5018	-.1185	-2.691	.0073*
Gender	-1.0938	-.1130	-2.539	.0114*
W/WO Children	.5918	.0560	1.252	.2110

*Statistically significant

independent variables of district size, gender and teaching level each account for a significant portion of the variability seen in the dependent variable. Based on these findings, Null Hypothesis 13 was rejected as the independent variables accounted for a significant portion of the variability seen in Factor 5.

Table 136. Summary of stepwise procedure for Attitude Toward Students and Classroom Climate.

Step	Variable	Multiple R	R^2	F	p
1	District Size	.1162	.0135	7.418	.007
2	Gender	.1470	.0216	5.971	.003
3	Teaching Level	.1795	.0322	5.996	.001

*Statistically significant

Null Hypothesis 14. The independent variables do not account for a significant portion of the variability seen in Attitude Toward Relationships with Parents and Students.

Inspection of the data in Tables 137 and 138 indicates significance at or below the .05 level for a relationship between the independent variables and Factor 6, Attitude Toward Relationships with Parents and Students. The magnitude of the variability which has been accounted for is R^2 equal to .05761. Upon adjustment for shrinkage, the adjusted R^2 was equal to .04530. A stepwise regression was done with these data and is reported in Table 139. This table shows that the independent variable of teaching level accounts for a significant portion of the variability seen in the dependent variable. Based on these findings, Null Hypothesis 14 was rejected as an independent

variable accounted for a significant portion of the variability seen in Factor 6.

Table 137. Analysis of variance regression for Attitude Toward Relationships with Parents and Students.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Regression	7	305.95439	43.70777	4.68106	.0000*
Residual	536	5004.71108	9.33715		

*Statistically significant

Table 138. Multiple regression analysis for Attitude Toward Relationships with Parents and Students by independent variables.

Variable	B (Raw Score)	Beta	T	p
Marital Status	.0038	.0009	.019	.9845
Education Level	.1162	.0807	1.832	.0675
District Size	.0051	.0024	.057	.9550
Interval Level	-.1746	-.0932	-2.129	.0337*
Teaching Level	-.5167	-.1807	-4.142	.0000*
Gender	.5711	.0874	1.981	.0481*
W/WO Children	.6075	.0852	1.922	.0552

*Statistically significant

Table 139. Summary of stepwise procedure for Attitude Toward Relationships with Parents and Students.

Step	Variable	Multiple R	R^2	F	p
1	Teaching Level	.1822	.0332	18.604	.0000*

*Statistically significant

Null Hypothesis 15. The independent variables do not account for a significant portion of the variability seen in Attitude Toward Professional Responsibilities of Teachers.

Inspection of the data in Tables 140 and 141 indicates significance at or below the .05 level for a relationship between the independent variables and Factor 7, Attitude Toward Professional Responsibilities of Teachers. The magnitude of the variability which has been accounted for is R^2 equal to .02748. Upon adjustment for shrinkage, the adjusted R^2 was equal to .01478. A stepwise regression

Table 140. Analysis of variance regression for Attitude Toward Professional Responsibilities of Teachers.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Regression	7	147.72924	21.10418	2.16374	.0359*
Residual	536	5227.90080	9.75355		

*Statistically significant

Table 141. Multiple regression analysis for Attitude Toward Professional Responsibilities of Teachers by independent variables.

Variable	B (Raw Score)	Beta	T	p
Marital Status	.0458	.0091	.204	.8384
Education Level	.0982	.0678	1.515	.1304
District Size	-.3171	-.1474	-3.416	.0007*
Interval Level	.0582	.0309	.694	.4878
Teaching Level	.0919	.0320	.721	.4712
Gender	.4092	.0623	1.389	.1654
W/WO Children	.0203	.0028	.063	.9501

*Statistically significant

was done with these data and is reported in Table 142. This table shows that the independent variable of district size accounted for a significant portion of the variability seen in the dependent variable. Based on these findings, Null Hypothesis 15 was rejected as an independent variable accounted for a significant portion of the variability seen in Factor 7.

Table 142. Summary of stepwise procedure for Attitude Toward Professional Responsibilities of Teachers.

Step	Variable	Multiple R	R^2	F	p
1	District Size	.1340	.0180	9.913	.002*

*Statistically significant

Null Hypothesis 16. The independent variables do not account for a significant portion of the variability seen in Attitude Toward Internal and External Pressures of Teaching.

Inspection of the data in Tables 143 and 144 indicates no significance at or below the .05 level for a relationship between the independent variables and Factor 8, Attitude Toward Internal and External Pressures of Teaching. The magnitude of the variability which has been accounted for is R^2 equal to .02308. Upon adjustment for shrinkage, the adjusted R^2 was equal to .01032. A stepwise regression was done with this data and is reported in Table 145. This table shows that the independent variable of teachers with or without children accounted for a significant portion of the variability seen in the dependent variable. Based on these results, Null Hypothesis 16 was

rejected as the stepwise statistical analysis showed a difference below the .05 level of significance.

Table 143. Analysis of variance regression for Attitude Toward Internal and External Pressures of Teaching.

Source of Variation	D.F.	Sum of Squares	Mean Squares	F	p
Regression	7	63.04170	9.00210	1.80869	.0833
Residual	536	2667.74077	4.97713		

Table 144. Multiple regression analysis for Attitude Toward Internal and External Pressures of Teaching by independent variables.

Variable	B (Raw Score)	Beta	T	p
Marital Status	.2044	.0646	1.439	.1507
Education Level	-.0329	-.0319	-.711	.4775
District Size	-.0727	-.0474	-1.097	.2733
Interval Level	.0538	.0401	.899	.3689
Teaching Level	-.0284	-.0138	-.312	.7554
Gender	-.3711	-.0792	-1.763	.0784
W/WO Children	.5254	.1028	2.276	.0232*

*Statistically significant

Table 145. Summary of stepwise procedure for Attitude Toward Internal and External Pressures of Teaching.

Step	Variable	Multiple R	R^2	F	p
1	W/WO Children	.0976	.0095	5.207	.023*

*Statistically significant

The following chapter, Chapter 5, includes the conclusions which resulted from analysis of these data. Recommendations to supervisors and suggestions for further study are also included.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

This study dealt with describing differences in attitudes of teachers in comparison to selected independent variables. The possible interaction between the independent variable of interval experience and the other selected independent variables on each dependent variable of attitude was also addressed. Finally, this study dealt with predicting the attitudes of teachers based upon the independent variables. The teachers involved in this study were members of the National Education Association in the states of Alaska, Idaho, Hawaii, Montana, Nevada, Oregon, and Washington. Each state association president was contacted and asked to contribute to the study by drawing a proportional random sample of K-12 teachers, both classroom and specialists, based upon gender from their membership pool. The surveys were mailed in October of 1987, and analysis of the data began in January 1988.

The presentation of this chapter begins with the conclusions which resulted from the analysis of data. The last two sections of this chapter deal with the recommendations to supervisors and for further study.

Conclusions

The attitudes of the teachers who participated in this study were very positive overall. In all but a few isolated cases, the mean

scores were above the midpoint in the range of scores possible on each factor. This would indicate an above average or positive attitude toward the various facets of the teaching profession. The significant differences which were found in this study ranged from a higher or lower positive attitude on each scale and do not indicate any real negative attitudes toward topics covered in the instrument. A study done by Kottkamp et al. (1986) adds credence to these findings. They replicated Dan Lortie's study of Data County teachers, reported in Schoolteacher (1975), and noted that satisfaction with job and workplace had declined slightly in the 1964-1984 period, but overall had remained relatively high. These two studies would seem to indicate that teachers as a group have positive feelings about their profession.

The significant differences which were found as a result of the one-way analysis of variance tests have led to the following conclusions: Male and female teachers did show a significant difference in their attitudes toward three of the factors: Factor 5, Attitude Toward Students and Classroom Climate; Factor 6, Attitude Toward Relationships with Parents and Students; and Factor 8, Attitude Toward Internal and External Pressures of Teaching. On Factors 5 and 8 the males had significantly higher means, thus more positive attitudes, than the female teachers and vice versa on Factor 6. The issues covered within Factor 5, Attitude Toward Students and Classroom Climate, are class control, whether teachers are comfortable with the content they teach, the variety of methods they use in teaching, and whether or not they are respected by their students. Male teachers in this study appeared to have more positive attitudes toward these topics than female

teachers. Women teachers, on the other hand, had more positive attitudes towards items in Factor 6, Attitude Toward Relationships with Parents and Students, than males. The issues covered in Factor 6 are student motivation and parental support. A high percentage of elementary teachers are female, a fact which must be considered when looking at the differences between male and female teachers. Elementary teachers deal with parents more closely than high school teachers who are predominately men, i.e, parent conferences, Parent Teacher Associations, and parental involvement in the school program. Perhaps this explains the more positive attitudes of women toward parents in this study. A study done by Cruickshank and Callahan (1983) supports the findings of this study. They reported that elementary school teachers were more concerned about their relationships with parents than secondary teachers. This increased concern may lead to the establishment of more positive relationships and thus more positive attitudes. Men were more positive in their attitudes toward societal expectations, expectations of pupils, and curriculum demands, issues covered in Factor 8, Attitude Toward Internal and External Pressures of Teaching.

Two significant differences were found when comparing married and unmarried teachers. On Factor 1, Attitude Toward Teaching as an Occupation, and on Factor 2, Attitude Toward Teaching Skills, the married teachers were found to have more positive attitudes. It would seem from these findings that married teachers had more positive attitudes toward the teaching profession and teaching skills than unmarried teachers. Gehrke (1979) reported that unmarried teachers

were less likely than their married counterparts to express concern about conflicting role demands between their personal and professional lives. The results of this study would indicate that this role conflict described by Gehrke does not appear to adversely affect the attitudes of teachers since the married teachers in this study had more positive attitudes toward teaching. Spencer's (1984) study of both married and unmarried women teachers cited these factors as differences between the two groups: socio-economic status, nearness of and responsibility for significant others, extracurricular duty differences (single teachers were asked to participate in more extracurricular duties than married teachers), and basic differences in time for leisure activity. These factors may also contribute to the differences found in this study between the attitudes in these two groups. On Factor 4, Attitude Toward Relationships with Supervisors and Students, the divorced teachers had more positive attitudes than unmarried teachers. Factor 4 deals with relationships with principals and establishing rapport with students.

The comparison of means for teachers with and without children yielded significant differences on three of the eight factors: Factor 1, Attitude Toward Teaching as an Occupation; Factor 4, Attitude Toward Relationships with Supervisors and Students; and Factor 8, Attitude Toward Internal and External Pressures of Teaching. On these three factors the teachers with children had significantly higher means than those without children. Teachers with children seemed to have more positive attitudes toward the teaching profession, students and supervisors, and the pressures of teaching than did those teachers

without children. Burden (1982b) adds clarity to this issue by stating the results of his study which indicated that "teachers' understanding of their own children also helped them in their classrooms" (p. 4). From this researcher's point of view, this increase in understanding which was indicated from Burden's study may be a result of their being more aware of students' behavior and lives in and out of the school setting and the various interests and pressures children encounter. This may result in more empathy and thus more positive attitudes toward students.

Teachers who teach in different size districts also showed significant differences in their attitudes. Attitude differences were found on Factor 2, Attitude Toward Teaching Skills; Factor 5, Attitude Toward Students and Classroom Climate; and Factor 7, Attitude Toward Professional Responsibilities. On Factors 2, 5, and 7, group five, or those teachers in districts which serve over 10,000 students, had less positive attitudes than other groups. On Factor 2, which deals with teaching skills, the significant difference occurred between group 5 and groups 1, 2, 3, and 4, or teachers who teach in districts with from 1 to 9999 students. On Factor 5, Attitude Toward Students and Classroom Climate, the significant difference was between group 5 (10,000 and over students) and groups 1 (1-999 students) and 3 (2000-4999 students). On Factor 7, Attitude Toward Professional Responsibilities, the significant difference was between group 5 and group 1 (1-999 students). This less positive attitude found in group 5 district size (10,000 and over) can be supported by a study done by Lester (1985) in which she found that teachers in small districts were

more satisfied than those from larger urban districts. A National Education Association study done in 1982 also found this to be true. Factors which may influence the lower attitude/satisfaction of teachers in larger districts may arise from a myriad of factors: the bureaucratic structure, differences in pay scales, union activities, leadership, curriculum choices and decision making, and/or differences in the community or areas in which these districts are found. These same issues are discussed by Lester.

Significant differences in means did exist between people who teach at different levels on five of the factors used in this study. On Factor 1, Attitude Toward Teaching as an Occupation, the elementary teachers had more positive attitudes than the high school teachers; on Factor 2, Attitude Toward Teaching Skills, elementary, junior high, and specialist teachers had significantly more positive attitudes toward their teaching skills than the high school teachers. On Factor 3, Attitude Toward Frustrations of Teaching, elementary teachers had more positive attitudes or felt less frustrated with the teaching profession than high school teachers. A study done by Chapman (1983) pointed out a difference in job satisfaction between elementary and high school teachers and attributed the lower job satisfaction of high school teachers to the basic difference in the structure of the elementary and secondary school work environments. He cited the lack of intact group contact, the emphasis on content, and less contact and recognition by administrators and supervisors as differences in the work environment which could lead to lowered job satisfaction. Results of a 1982 NEA study concur that elementary teachers were the most satisfied groups,

while the secondary teachers were the most dissatisfied. Lester (1985) also noted that teachers in her study revealed the same results.

On Factor 5, Attitude Toward Students and Classroom Climate, and on Factor 6, Attitude Toward Relationships with Parents and Students, the elementary and specialist teachers had higher means than the high school teachers. On Factor 6, Relationships Toward Parents and Students, elementary teachers and specialists also had more positive attitudes toward parents and students than the junior high teachers. These findings concerning the less positive attitudes of high school teachers toward students is supported by David Ryans' (1960) study done over 40 years ago. He reported secondary teachers showed less favorable attitudes toward students than elementary teachers. Adams (1981) reported that elementary teachers were more child-centered than secondary teachers. Based upon the data from this study, it would appear that high school teachers are generally less positive about students, classroom climate, and parents than elementary and specialist teachers.

The independent variable of education level showed no significant differences on any factor. Education level, on this particular instrument, does not influence teachers' attitudes either more positively or negatively.

Teachers at different levels of experience showed significant differences in their means on three of the factors used in this study: Factors 2, 3, and 5. On Factor 2, Attitude Toward Teaching Skills, the significant difference was found between the teachers in the 5-9 years of experience range and those in the 20-24 years range of experience (see Figure 2, Appendix A). The teachers in the 20-24 year range had

the lower mean, therefore the less positive attitude toward teaching skills, of the two groups. Teachers in this study would seem to become less positive about their teaching skills as they gain in experience. Burden (1980) adds perspective to this finding. He reported that teachers beyond their fifth year of experience felt they had a good command of planning and organizing teaching activities, that they knew children and the curriculum, and that they used different teaching methods quite well. Perhaps, as teachers gain experience, they become more aware of the intricacies of teaching and progressively feel less able to meet demands of their profession resulting in less positive attitudes toward their teaching skills. The teachers in interval experience level 2 (5-9 years of experience), on the other hand, expressed more positive attitudes toward teaching skills. This would seem to fit the descriptors of the Self-Selection Career Stage 3 and/or 4 (see Appendix B) when teachers are striving to improve in their teaching skills, are open to new ideas, and are confident in their ability to teach.

The second factor which tested with a significant difference between means was Factor 3, Attitude Toward Frustrations of Teaching. The teachers in the 0-4 years of experience group had significantly higher means than those teachers in the 10-24 years of experience range (approximately 34 to 50 years of age) (see Figure 3, Appendix A). The higher mean of the 0-4 years of experience teachers would indicate that their attitude toward the frustrations of teaching was less than those teachers in the 10-24 years of experience span. The higher the mean, the less frustration experienced. Farber (1984) reported that the

teachers most at risk for burnout, i.e., having less positive attitude, were those in the 34 to 44 age group. This correlates with the 10-24 year experience span. The reasons Farber cited from the research on teacher burnout included items which were found in Factor 3 of this study: student discipline problems, shortage of support staff, excessive paperwork, lack of promotional opportunities, demanding parents, lack of administrative support, public criticism of teachers, and role con-flict. This research would support Farber's contention that teachers become more dissatisfied with teaching as they progress through their careers. Peterson (1979), on the other hand, found teachers' commitment to teaching waned in their late twenties and early thirties and then improved until approximately age 50. Warren Peterson (1964) found a decline in commitment from age 35 to 40. This is supported by the results of this study which found teachers in interval experience level 1 (0-4 years of experience) were significantly less frustrated with teaching than those in the 10-24 year experience range. Correlating the Self-Selection Career Stages developed by Burke et al. (1984) (see Appendix B), it would seem that teachers in interval levels 3, 4, and 5 (10-24 years of experience) would be in Burke et al.'s stage 5 and/or stage 6.

The third area of significant difference was found between teachers in the 0-4 years of experience range and those in the 5-9 and 10-14 years of experience ranges with regard to Factor 5, Attitude Toward Students and Classroom Climate. The teachers in the 5-14 years of experience range were more positive in their attitudes toward students and classroom climate than those in the 0-4 year experience

range. Newman (1979) and Burden (1980) both reported that teachers became more flexible and positive with students as they gained experience. These teachers in the 5-14 years of experience range would seem to be overlapping between developmental stages 4 and 5 on the continuum of Burke et al. (1984). Teachers in interval experience level 3, 10-14 years of experience, expressed higher frustration but more positive attitudes toward students and classroom climate. Perhaps this is a critical experience range since developmental stage 4 has more positive connotations than stage 5 (see Appendix B).

The two-way analysis of variance which was used to test for interaction between the interval experience and all other selected independent variables was found to be significant in one area. The significant interaction occurred on Factor 3, Attitude Toward Frustrations of Teaching (see Figure 1, Chapter 4), between the independent variables of teachers with/without children and interval experience. Disregarding interval experience levels 7 (30-34 years) and 8 (35-39 years) because of low cell size (total 28), and upon studying the interaction, it would appear that teachers without children have more variability in their levels of frustration than those teachers with children. Looking at the means for teachers with/without children, the teachers without children had significantly lower means than those with children (see Tables 121 and 122, Chapter 4). Since a higher mean equals less frustration, it would also appear that teachers without children are more frustrated with teaching than those with children.

The results of the multiple regression tests indicated that on Factors 1, 2, 3, 5, 6, 7, and 8 there were characteristics of teachers

which accounted for a significant portion of the variability seen in those factors. The R squared which shows the magnitude or the percentage of variability was low in all factors. As a result, there was a statistical significance, but not a practical one. On Factor 1, the R squared was equal to .0328; on Factor 2, .04082; on Factor 3, .02714; on Factor 5, .04113; on Factor 6, .07761; on Factor 7, .02748; and on Factor 8, .02308. In all cases, the percent of the variance which was accounted for by knowledge of the independent variables on each dependent variable was below .08. Ninety-two percent or more of the variability seen in the dependent variables of attitude is unexplained by these models. That these particular independent variables do not appear to influence a teacher's attitude toward factors included in this study can be interpreted in a positive way. These are variables, for the most part, that are not controlled by administration and/or supervisors. Perhaps the independent variables which do account for the variability of the dependent variables are ones which can be influenced by school district personnel. These results would indicate that the independent variables used in this study have little predictive value on this sample's attitudes toward the dependent variables.

Recommendations to Supervisors

Based on the findings of this study, the following recommendations are made to supervisors and planners of teacher in-service and staff development:

(1) Supervisors should incorporate the knowledge that teachers' attitudes are influenced by the demographic variables of gender, district size, marital status, teaching level, interval of experience, and whether or not they have children. Awareness of these influences upon teacher attitude should motivate supervisors to individualize supervision so that attitude differences are taken into account.

(2) Knowledge that teachers in the 20-24 years of experience interval have less positive attitudes than those in the 5-9 years experience interval toward teaching skills should encourage supervisors to provide different types of in-service, staff development, and supervision for the two groups.

(3) Supervisors who supervise teachers in the 10-24 years of experience interval range should establish procedures and/or techniques which assist those teachers in dealing with the higher frustration levels evidenced by the teachers in this study.

(4) The less positive attitude toward students and classroom climate of teachers with 0-4 years of experience should indicate to supervisors that in-service and staff development should be adopted which assists those teachers in becoming less self-concerned (Fuller, 1969) and more student-concerned.

(5) The significant differences in attitude which were found between the elementary and high school teachers toward teaching as an occupation, teaching skills, frustrations of teaching, students and classroom climate, and relationships with parents and students should indicate to supervisors the necessity of creating plans and

programs for in-service, staff development, and supervision which better fit the needs of the two diverse groups. The less positive attitudes of the high school teachers should cause supervisors to develop strategies which will foster more positive attitudes in those areas.

(6) Supervisors in large school districts (over 10,000 students) should find ways to improve the attitudes of teachers in those districts toward teaching skills, students and classroom climate, and professional responsibilities as significant differences were found between those teachers and teachers in smaller districts.

Recommendations for Further Study

Based on the findings and conclusions drawn from this study, the following recommendations are indicated for further research:

(1) This study should be replicated with teachers in other regional areas of the United States or, if possible, all 50 states using the same or a modified instrument to determine if similar results are obtained.

(2) Additional research should be carried out on the instrument used in this study to further refine the items and factors which were different from previous instruments. Other attitude statements should be developed which would seem to fit the factors with few items listed. This should be followed by a factor analysis to determine if they do in fact load onto those factors. Factor names should be changed to reflect the essence of the new factors.

(3) Studies using independent variables different than those used in this study should be carried out. Suggested variables might be:

(a) Have teachers made a grade level, building, or assignment change during the course of their teaching career?

(b) Has the district or school had a major change in administration personnel or policy?

(c) What are the types and opportunities for staff input and development within the district?

(d) What type of supervision models are used, and is there a difference in teachers' attitudes with different models?

(e) Is there a correlation between the climate of a school district or building and the attitudes of teachers?

(f) Has the teacher been actively involved in life-long learning situations (graduate school, community adult courses, fitness classes, etc.)?

(g) Has the teacher been a participant on district committees or attended conferences?

(h) How do forces outside of the school influence teachers' attitudes?

Community expectations, professional organizations, contract negotiations, parent teacher organizations, and degree of fiscal support are examples of possible variables.

(4) In-depth research needs to be conducted within each of the levels of interval experience and within the different groups of the independent variables to determine the reasons and/or differences which influenced more positive teacher attitudes.

(5) The interval experience levels with small cell size need to be investigated and cell size should be increased to determine whether they accurately describe that population of teachers, i.e., those groups of teachers at interval levels 1 (0-4 years of experience), 7 (30-34 years of experience), and 8 (35-39 years of experience).

(6) A population of teachers which reflects all teacher groups and not just that of the National Education Association should be sampled to determine if group membership influences attitudes.

(7) A similar study should be conducted at a different time of the year to determine if similar results are obtained.

(8) A longitudinal study which follows a set of teachers throughout their teaching careers should be undertaken to determine if the same pattern is seen in experience and if the attitudes of teachers in different demographic settings change with time similar to those found in this study.

(9) An attempt should be made to correlate years of experience to the developmental stages proposed by Burke et al. (1984).

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APPENDICES

APPENDIX A

FIGURES 2, 3, AND 4

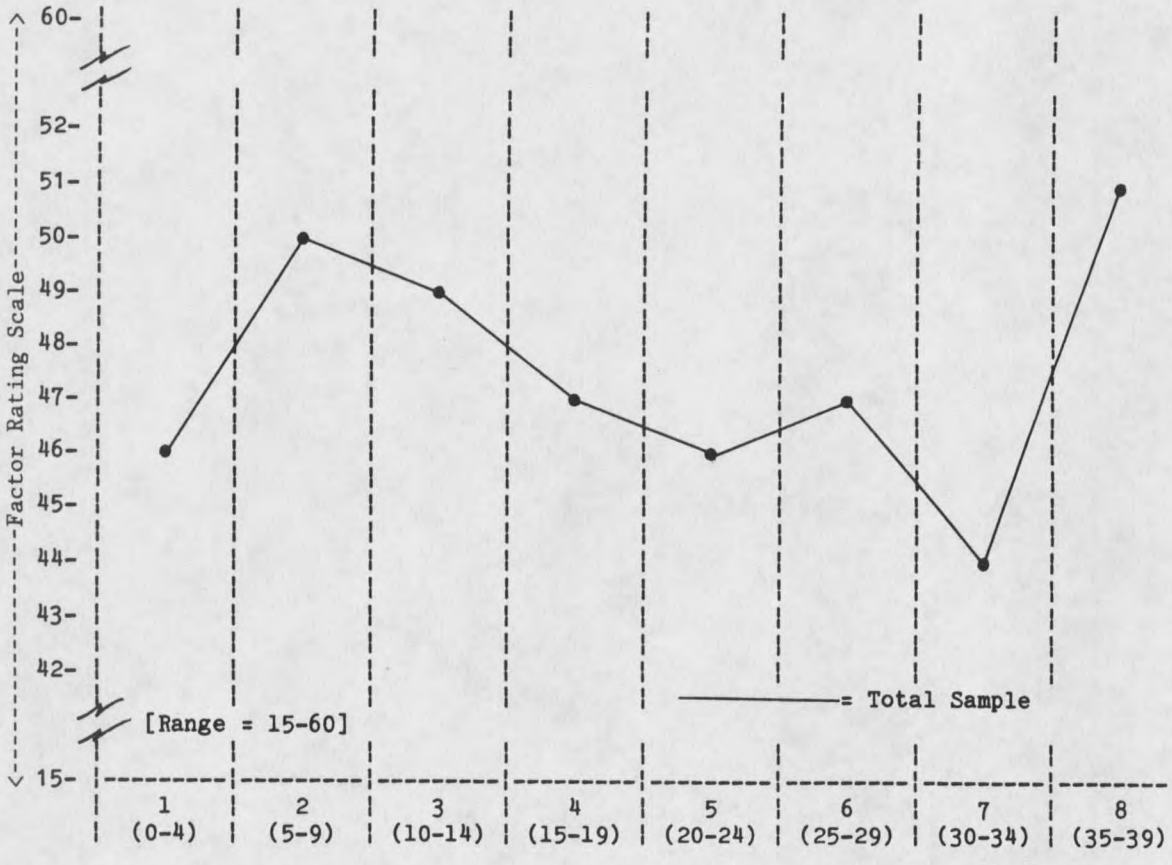
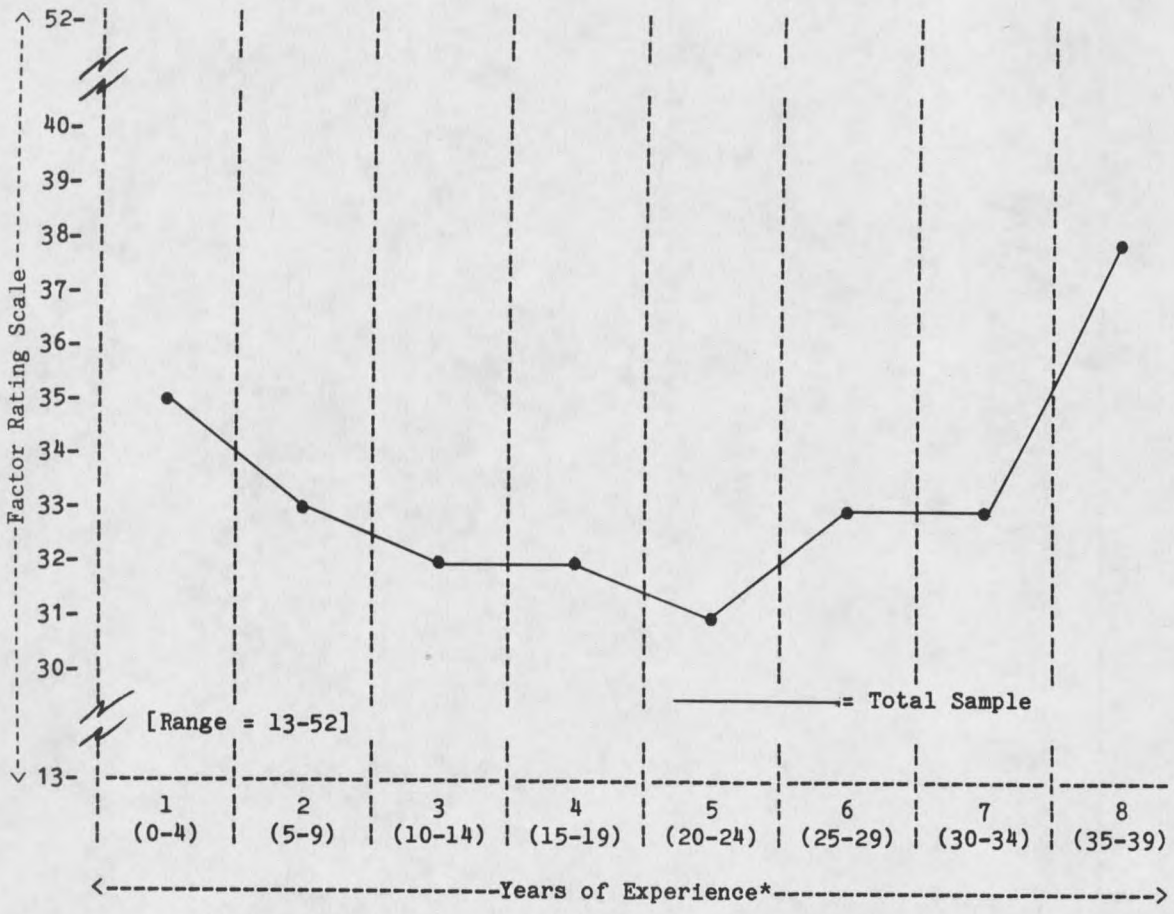
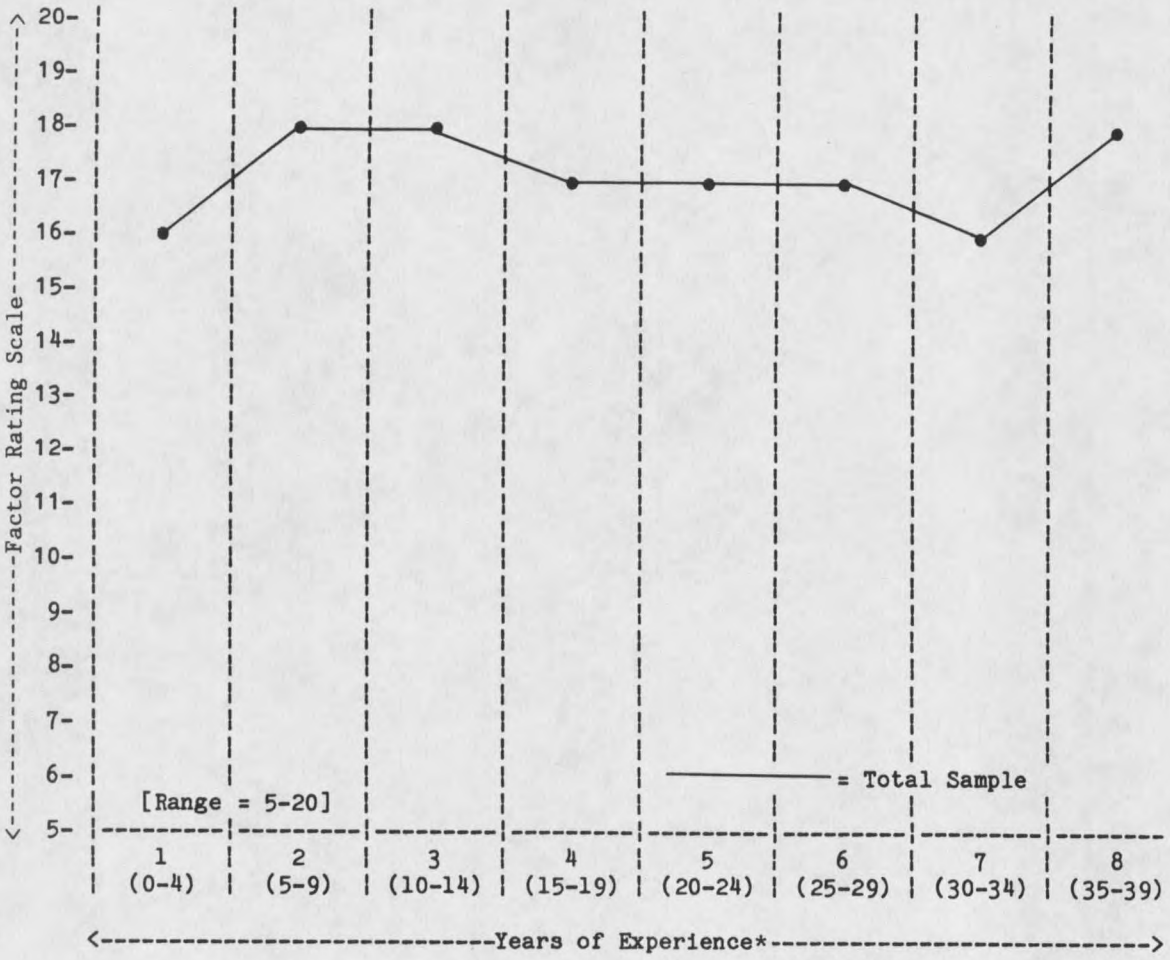


Figure 2. Plotted means of years of teaching experience on Attitude Toward Teaching Skills.



*Significant difference between group 1 and groups 3, 4, 5.

Figure 3. Plotted means of years of teaching experience on Attitude Toward Frustrations of Teaching.



*Significant difference between group 1 and groups 2 and 3.

Figure 4. Plotted means of years of teaching experience on Attitude Toward Students and Classroom Climate.

APPENDIX B

LETTER OF TRANSMITTAL, SURVEY INSTRUMENT, AND TEACHER CAREER CYCLE INVENTORY

BEVERLY J. HOLLENSTEINER
102 Paisley Court, Apt. E
Bozeman, Montana 59715

Dear Fellow Teacher,

During my years as a teacher, I have experienced many ups and downs in my feelings and attitudes toward the many aspects of the teaching profession. These changes were influenced by events both in my professional and personal life. The following survey has been designed to detect these changes during a teacher's career. As part of my doctoral work at Montana State University, I am attempting to identify teachers' attitudes so that meaningful and appropriate professional development can be tailored to meet teachers' needs as they progress through their careers.

I would really appreciate your contribution to this research. I am aware of the many demands upon a teacher's time and as a result this survey has been designed to take approximately 20 minutes in which to complete the demographic data, the self-selection career stage section, and the attitude survey section. A General-Purpose NCS Answer Sheet has been enclosed. Please use a pencil when marking the form. When you have completed the form, place it in the enclosed envelope which has the proper postage and address label and mail. Please do not fold or staple the NCS sheet.

You were identified through your state education association to participate in this study and your responses will remain confidential. Teachers in the states of Oregon, Montana, Idaho, Nevada, Washington, Hawaii, and Alaska are involved in this study. I have been very pleased with the assistance I have been given by your state associations and with their enthusiasm regarding this endeavor. The results of the survey will be shared with your associations. Your cooperation is most important since a good return rate is essential to the quality of the results and consequently the decisions which are made from the data.

Through this study, I hope positive changes will be made in creating better teaching environments for teachers and will also lead to the use of an improved supervision and evaluation process in our schools.

Thank you for your time and effort, and I look forward to receiving your survey. Please return the NCS sheet by November 16, 1967.

Sincerely,

Beverly J. Hollensteiner

TEACHER SURVEY

DEMOGRAPHIC INFORMATION

Please mark the appropriate circles on the demographic information and on the self-selection of career stages on the left-hand side of the NCS answer sheet. The survey statement responses will be marked on the right-hand side of the sheet. Do not fill in the name section of the NCS sheet.

(1) Gender: Mark appropriate circle under SEX.

(2) Education level: Mark under GRADE OR EDUC section:

Mark:			
1	BS or BA	6	MS + 15 (10 semester)
2	BS + 15 (10 semester)	7	MS + 30 (20 semester)
3	BS + 30 (20 semester)	8	MS + 45 (30 semester)
4	BS + 45 (30 semester)	9	Doctorate/Specialist Degree
5	MS or MA		

(3) Number of years of experience: Mark under BIRTHDATE DAY only.
For example: 1 year of experience would be marked 01.
12 years of experience would be marked 12.

(4) Age: Mark under BIRTHDATE YR only.
For example: If you are 35 years of age, mark 35.

(5) Ethnic background: Mark under IDENTIFICATION NUMBER, column A:

Mark:			
1	Mexican-American	4	Native American
2	Black	5	Asian-American
3	White	6	Other

(6) Marital Status: Mark under IDENTIFICATION NUMBER, column B:

Mark:			
1	married	3	divorced
2	single	4	widowed

(7) Child/Children: Mark under IDENTIFICATION NUMBER, column C:

Mark:			
1	no children	2	child/children

(8) Age of child/children: Mark under IDENTIFICATION NUMBER, column D. You may mark more than one.

Mark:			
1	no children	4	junior high (7-8)
2	pre-school	5	high school (9-12)
3	elementary (K-6)	6	18 or over

(9) Current teaching assignment: Mark under IDENTIFICATION NUMBER, column E. You may mark more than one.

Mark:			
1	primary (K-3)	4	high school (9-12)
2	intermediate (4-6)	5	specialist
3	junior high (7-8)		

(10) District student population size: Mark under IDENTIFICATION NUMBER, column F:

Mark: 1 districts from 1-25
2 districts from 26-500
3 districts from 501-999
4 districts from 1000-1999
5 districts from 2000-4999
6 districts from 5000-9999
7 districts of 10,000 or more

SELF-SELECTION OF CAREER STAGES:

(11) Choose one of the following eight stages. Mark under IDENTIFICATION NUMBER, column G:

Mark: 1 This stage is the period of preparation for a specific professional role. Typically, this would be the period of initial preparation in a college or university. It might also include retraining for a new role or assignment, either by attending a higher education institution or as part of staff development with the work setting.

2 This stage is generally defined as the first few years of employment, when the teacher is socialized into the system. It is a period when a new teacher strives for acceptance by students, peers, and supervisors and attempts to achieve a comfort and security level in dealing with everyday problems and issues. Teachers may also experience this stage when shifting to another grade level, another building, or when changing districts completely.

3 During this stage of the career cycle, the teacher is striving to improve teaching skills and abilities. The teacher seeks out new materials, methods, and strategies. Teachers at this stage are receptive to new ideas, attend workshops and conferences willingly, and enroll in graduate programs through their own initiative. Their job is seen as challenging and they are eager to improve their repertoire of skills.

4 At this stage, teachers have reached a high level of competence in their job but continue to progress as professionals. Teachers in this stage love their jobs, look forward to going to school and to the interaction with their students, and are constantly seeking new ways to enrich their teaching. Key ingredients here are enthusiasm and high levels of job satisfaction. These teachers are often supportive and helpful in identifying appropriate in-service education activities for their schools.

5 This period is characterized by frustration and disillusionment with teaching. Job satisfaction is waning, and teachers begin to question why they are doing this work. Much of what is described as teacher burnout in the literature occurs in this stage.

6 At this stage teachers have resigned themselves to putting in "a fair day's work for a fair day's pay." They are doing what is expected of them, but little more. These teachers are often fulfilling the terms of their contracts, but see little value in professional development programs. They are seldom motivated to participate in anything at more than a surface level and are passive consumers of in-service efforts at best.

7 This is the stage when a teacher is preparing to leave the profession. For some, it may be a pleasant period in which they reflect on the many positive experiences they have had and look forward to a career change or retirement. For others, it may be a bitter period, one in which a teacher resents the forced job termination or, perhaps, can't wait to get out of an unrewarding job. A person may spend several years in this stage, or it may occur only during a matter of weeks or months.

8 The exit stage of a teacher's career represents the period of time after the teacher leaves the job, but includes circumstances other than simple retirement after many years of service. It could be a period of unemployment after involuntary or elective job termination or a temporary career exit for child-rearing. It could also be a time of alternative career exploration or of moving to a nonteaching position such as administration.

SOURCE: Collegial Research Consortium, Ltd., 1986.

TEACHER ATTITUDE SCALE

The following statements have been generated by teachers to describe themselves and their careers. The numbered items to the right of your NCS form are to be used for this section. Please read each item and darken the circle which corresponds to your answer on the NCS Answer Sheet.

The following scale will be used throughout the survey:

Column:	A	B	C	D	E
Number:	1	2	3	4	5
	Strongly Agree	Moderately Agree	Moderately Disagree	Strongly Disagree	Not Applicable

(1) It is exciting to decide what I'm going to teach.

(2) I reflect on my teaching career with pride.

(3) I feel angry.

(4) I enjoy sharing ideas with other teachers.

(5) I still have a lot to learn about teaching.

(6) Each year it becomes increasingly difficult to be enthusiastic about teaching.

(7) I attend to students' individual needs.

(8) I would be happier doing something other than teaching.

(9) I am frustrated.

(10) I am active in my professional organization.

(11) I am learning about new technology.

(12) I am building a store of materials and ideas.

(13) I have a tremendous amount of energy.

(14) I make an effort to be involved in curriculum development.

(15) I enjoy teaching and look forward to going to work every day.

(16) I am respected by my students.

(17) Graduate coursework has helped me as a teacher.

(18) I try to make each day better than the one before.

(19) I look for ways to improve our school.

(20) I am gaining comfort and security through experience.

(21) I am able to establish rapport with my students.

(22) My family positively affects my teaching.

(23) Administration does not want to hear problems of teachers.

(24) I am willing to try new ideas and teaching strategies.

(25) My teaching situation is unstable.

(26) I utilize a variety of methods in my classroom.

(27) I am comfortable with most of what I teach.

(28) My principal has confidence and trust in me as a teacher.

(29) I am generally optimistic about teaching.

(30) I need a push to get me through the doldrums.

(31) The morale at my school is low.

(32) I enjoy my colleagues.

(33) I believe professional journals should be read regularly.

(34) There is not enough budgetary support to purchase instructional materials.

(35) I would like to teach part-time so I could pursue other interests.

(36) My work is challenging.

(37) I enjoy my students.

(38) I love to teach.

(39) I am learning new things each day.

(40) I dread going to work.

(41) It is important for me to organize and make presentations at conferences.

(42) The school bureaucracy frustrates me.

(43) I strive to improve my teaching skills.

(44) My superiors frustrate me.

(45) Teachers should provide many opportunities to meet with parents.

(46) There are few rewards for my professional efforts.

(47) Parents are apathetic and give little support.

(48) I am concerned about the influence of special interest groups.

(49) Parents are supportive of my teaching.

(50) I am respected by my supervisors.

(51) Lack of public trust bothers me.

(52) I question the competence of decision makers in my school district.

(53) I want to learn from other teachers.

(54) School is not important to my students.

(55) Being evaluated by my supervisor worries me.

(56) I feel I am not treated professionally.

(57) My work is dull.

(58) The academic climate in my school is discouraging.

(59) The teachers' association in my school district has a positive influence on teachers.

(60) I have a good working relationship with my principal.

(61) I always attend regional, national, or state teacher conventions.

(62) Societal expectations are a concern to me.

(63) I enjoy seeing students respond positively to my teaching.

(64) I maintain appropriate class control.

(65) My pupils expect too much of me.

(66) I usually leave school with a sense of satisfaction.

(67) Curriculum demands pressure me.

(68) My principal has the necessary expertise to evaluate me.

(69) Paperwork and non-teaching activities frustrate me.

(70) My students are very motivated to learn.

Instrument developed by: Collegial Research Consortium, Ltd., 1987; modifications by Beverly J. Hollensteiner, 1987.

Table 146. Teacher Career Cycle Inventory.

Item No.	Items	Factor Loadings
	Factor 1: Teaching as an Occupation	
2	I reflect on my teaching career with pride.	.52
3	I feel angry.	-.53
6	Each year it becomes increasingly difficult to be enthusiastic about teaching.	-.62
8	I would be happier doing something other than teaching	-.73
9	I am frustrated.	-.71
11	I enjoy teaching and look forward to going to work every day.	.60
20	I am gaining comfort and security through experience.	.39
29	I am generally optimistic about teaching.	.58
30	I need a push to get me through the doldrums.	-.52
35	I would like to teach part-time so I could pursue other interests.	-.48
36	My work is challenging.	.48
38	I love to teach.	.57
39	I am learning new things every day.	.50
40	I dread going to work.	-.65
49	I am enthusiastic about teaching.	.64
54	I usually leave school with a sense of satisfaction.	.55
57	My work is dull.	-.44

Alpha (positively worded items) = .91
Alpha (negatively worded items) = .85
Percent of variance = 44.2

Table 146--Continued

Item No.	Items	Factor Loadings
	Factor II: Teaching Skills	
1	It is exciting to decide what I'm going to teach.	.47
12	I am learning about new technology.	.45
13	I am building a store of materials and ideas.	.56
14	I have a tremendous amount of energy.	.48
18	I try to make each day better than the one before.	.63
19	I look for ways to improve our school.	.58
25	I am willing to try new ideas and teaching strategies.	.63
33	I read professional journals regularly.	.48
36	My work is challenging.	.44
43	I strive to improve my teaching skills.	.73
50	I am comfortable with most of what I teach.	.30
51	I enjoy seeing students respond positively to my teaching.	.40
53	I want to learn from other teachers.	.68
	Alpha = .88 Percent of variance = 17.5	
	Factor III: Frustrations of Teaching	
3	I feel angry	.44
6	Each year it becomes increasingly difficult to be enthusiastic about teaching.	.32
9	I am frustrated.	.41
11	I enjoy teaching and look forward to going to work every day.	-.32

Table 146--Continued

Item No.	Items	Factor Loadings
	Factor III, cont'd.	
24	Administration does not want to hear problems of teachers.	.60
31	The morale at my school is low.	.60
34	There is not enough budgetary support to purchase instructional materials.	.37
40	I dread going to work.	.40
42	The school bureaucracy frustrates me.	.74
44	My superiors frustrate me.	.74
46	There are few rewards for my professional efforts.	.44
52	I question the competence of decision makers in my school district.	.77
55	Paperwork and non-teaching activities frustrate me.	.51
56	I feel I am not treated professionally.	.67
58	The academic climate in my school is discouraging.	.50
		Alpha = .87
		Percent of variance = 7.5
	Factor IV: Professional Aspects of Teaching	
4	I organize workshops for teachers.	.83
10	I am an active member of professional associations (non-union).	.33
12	I am learning about new technology.	.38
15	I am involved in curriculum development.	.40

Table 146--Continued

Item No.	Items	Factor Loadings
	Factor IV, cont'd.	
22	I supervise student teachers/interns.	.35
28	I present workshops to teachers.	.90
41	I make presentations at conferences.	.62
	Alpha =	.79
	Percent of variance =	5.1
	Factor V: Student Interaction	
11	I enjoy teaching and look forward to going to work every day.	.30
14	I have a tremendous amount of energy.	.42
15	I am involved in curriculum development.	.33
16	I am respected by my students.	.69
19	I look for ways to improve our school.	.31
21	I have established rapport with my students.	.71
37	I enjoy my students.	.51
	Alpha =	.81
	Percent of variance =	4.6
	Total Percent of variance for five factors =	78.9

APPENDIX C

TWO-WAY ANOVA SUMMARY TABLES

Table 147. Two-way analysis of variance summary on Factors 1-8 by interval experience and gender.

Factors 1-8**	N Total	Mean Total	F	p
Factor 1	739	48.12		
Main Effects			0.985	0.44
Interaction			1.276	0.25
Factor 2	738	47.87		
Main Effects (Experience)			2.500	0.01*
Interaction			1.205	0.29
Factor 3	735	32.42		
Main Effects (Experience)			2.644	0.00*
Interaction			1.422	0.19
Factor 4	750	18.57		
Main Effects			1.751	0.08
Interaction			0.448	0.87
Factor 5	749	16.98		
Main Effects (Gender & Exper.)			2.836	0.00*
Interaction			1.371	0.21
Factor 6	747	14.28		
Main Effects (Gender)			2.717	0.00*
Interaction			0.982	0.44
Factor 7	750	13.44		
Main Effects			0.835	0.57
Interaction			0.578	0.77
Factor 8	754	11.46		
Main Effects			1.664	0.10
Interaction			0.821	0.57

*Statistically significant

**Factors 1-8 = Attitude Toward...
1. Teaching as an Occupation
2. Teaching Skills
3. Frustrations of Teaching
4. Relationships with Supervisors and Students
5. Students and Classroom Climate
6. Relationships with Parents and Students
7. Professional Responsibilities
8. Internal and External Pressures of Teaching

Table 148. Two-way analysis of variance summary on Factors 1-8 by interval experience and education level.

Factors 1-8**	N Total	Mean Total	F	p
Factor 1	755	48.03		
Main Effects			1.062	0.38
Interaction			1.068	0.38
Factor 2	773	47.74		
Main Effects (Experience)			2.120	0.02*
Interaction			0.851	0.59
Factor 3	731	32.31		
Main Effects (Experience)			2.044	0.03*
Interaction			1.132	0.33
Factor 4	747	18.53		
Main Effects			1.365	0.20
Interaction			0.963	0.48
Factor 5	746	16.94		
Main Effects			1.758	0.07
Interaction			1.341	0.19
Factor 6	743	14.24		
Main Effects			1.828	0.06
Interaction			0.929	0.51
Factor 7	746	13.41		
Main Effects			0.816	0.60
Interaction			0.321	0.98
Factor 8	752	11.46		
Main Effects			0.989	0.44
Interaction			0.626	0.82

*Statistically significant

**Factors 1-8 = Attitude Toward...
1. Teaching as an Occupation
2. Teaching Skills
3. Frustrations of Teaching
4. Relationships with Supervisors and Students
5. Students and Classroom Climate
6. Relationships with Parents and Students
7. Professional Responsibilities
8. Internal and External Pressures of Teaching

Table 149. Two-way analysis of variance summary on Factors 1-8 by interval experience and district size.

Factors 1-8**	N Total	Mean Total	F	p
Factor 1	725	48.23		
Main Effects			1.001	0.44
Interaction			0.925	0.57
Factor 2	724	47.97		
Main Effects (Dist. Size & Exper.)			3.666	0.00*
Interaction			1.017	0.44
Factor 3	724	32.43		
Main Effects (Experience)			1.870	0.04*
Interaction			0.824	0.71
Factor 4	738	18.59		
Main Effects			1.585	0.09
Interaction			1.329	0.13
Factor 5	737	17.03		
Main Effects (Dist. Size & Exper.)			2.408	0.00*
Interaction			0.925	0.57
Factor 6	732	14.35		
Main Effects			1.163	0.30
Interaction			0.689	0.87
Factor 7	736	13.45		
Main Effects (Dist. Size)			1.795	0.05*
Interaction			0.493	0.98
Factor 8	741	11.50		
Main Effects			1.291	0.22
Interaction			0.908	0.59

*Statistically significant

**Factors 1-8 = Attitude Toward...
1. Teaching as an Occupation
2. Teaching Skills
3. Frustrations of Teaching
4. Relationships with Supervisors and Students
5. Students and Classroom Climate
6. Relationships with Parents and Students
7. Professional Responsibilities
8. Internal and External Pressures of Teaching

Table 150. Two-way analysis of variance summary on Factors 1-8 by teaching level and interval experience.

Factors 1-8**	N Total	Mean Total	F	p
Factor 1	533	49.76		
Main Effects (Tch'g Level)			2.084	0.02*
Interaction			1.073	0.39
Factor 2	554	51.41		
Main Effects (Experience)			4.088	0.00*
Interaction			1.071	0.37
Factor 3	551	32.69		
Main Effects (Tch'g Level & Experience)			2.458	0.00*
Interaction			0.571	0.93
Factor 4	559	19.47		
Main Effects			0.724	0.70
Interaction			0.810	0.70
Factor 5	559	18.55		
Main Effects (Tch'g Level & Experience)			3.133	0.00*
Interaction			0.670	0.85
Factor 6	558	14.71		
Main Effects (Tch'g Level)			8.873	0.00*
Interaction			0.804	0.71
Factor 7	561	13.54		
Main Effects			0.825	0.60
Interaction			0.589	0.92
Factor 8	561	11.85		
Main Effects			1.410	0.17
Interaction			1.401	0.11

*Statistically significant

**Factors 1-8 = Attitude Toward...
1. Teaching as an Occupation
2. Teaching Skills
3. Frustrations of Teaching
4. Relationships with Supervisors and Students
5. Students and Classroom Climate
6. Relationships with Parents and Students
7. Professional Responsibilities
8. Internal and External Pressures of Teaching

Table 151. Two-way analysis of variance summary on Factors 1-8 by marital status and interval experience.

Factors 1-8**	N Total	Mean Total	F	p
Factor 1	732	48.11		
Main Effects (Marital Status)			2.358	0.01*
Interaction			0.678	0.83
Factor 2	731	47.79		
Main Effects (Marital Status & Experience)			3.271	0.00*
Interaction			0.943	0.52
Factor 3	731	32.37		
Main Effects (Experience)			2.532	0.00*
Interaction			1.208	0.24
Factor 4	744	18.57		
Main Effects (Marital Status)			2.256	0.01*
Interaction			0.865	0.62
Factor 5	743	16.97		
Main Effects (Experience)			2.416	0.00*
Interaction			0.975	0.48
Factor 6	740	14.28		
Main Effects			1.706	0.07
Interaction			0.694	0.81
Factor 7	743	13.41		
Main Effects			0.738	0.68
Interaction			0.930	0.54
Factor 8	749	11.46		
Main Effects			0.937	0.49
Interaction			1.008	0.44

*Statistically significant

**Factors 1-8 = Attitude Toward...
1. Teaching as an Occupation
2. Teaching Skills
3. Frustrations of Teaching
4. Relationships with Supervisors and Students
5. Students and Classroom Climate
6. Relationships with Parents and Students
7. Professional Responsibilities
8. Internal and External Pressures of Teaching

Table 152. Two-way analysis of variance summary on Factors 1-8 by teachers with/without children and interval experience.

Factors 1-8**	N Total	Mean Total	F	p
Factor 1	684	48.07		
Main Effects (W/WO Children)			2.019	0.04*
Interaction			0.974	0.44
Factor 2	683	47.76		
Main Effects (Experience)			2.462	0.01*
Interaction			0.142	0.99
Factor 3	682	32.34		
Main Effects (Experience)			2.779	0.00*
Interaction			3.419	0.00*
Factor 4	695	18.53		
Main Effects (W/WO Children)			1.635	0.11
Interaction			0.424	0.88
Factor 5	694	16.96		
Main Effects (Experience)			2.026	0.04*
Interaction			0.267	0.96
Factor 6	691	14.28		
Main Effects (W/WO Children)			1.921	0.05*
Interaction			0.872	0.52
Factor 7	694	13.47		
Main Effects			1.019	0.42
Interaction			0.410	0.89
Factor 8	700	11.46		
Main Effects			1.478	0.16
Interaction			0.870	0.53

*Statistically significant

**Factors 1-8 = Attitude Toward...
1. Teaching as an Occupation
2. Teaching Skills
3. Frustrations of Teaching
4. Relationships with Supervisors and Students
5. Students and Classroom Climate
6. Relationships with Parents and Students
7. Professional Responsibilities
8. Internal and External Pressures of Teaching

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