

1990

# The study of factors which influence ratings of adequacy of the teacher preparation program at Iowa State University

James T. Dolak  
*Iowa State University*

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**The study of factors which influence ratings of adequacy of the  
teacher preparation program at Iowa State University**

**Dolak, James T., Ph.D.**

**Iowa State University, 1990**

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The study of factors which influence ratings  
of adequacy of the teacher preparation program  
at Iowa State University

by

James T. Dolak

A Dissertation Submitted to the  
Graduate Faculty in Partial Fulfillment of the  
Requirements for the Degree of  
DOCTOR OF PHILOSOPHY

Department: Professional Studies in Education  
Major: Education (Higher Education)

**Approved:**

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**For the Major Department**

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**For the Graduate College**

Iowa State University  
Ames, Iowa

1990

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## CHAPTER 1. BACKGROUND

As the decade of the '80s ends, the amount of attention that has been focused on education from the public sector these past 10 years has resulted in scrutiny and debate about the educational process. From the National Commission on Excellence in Education report, *Nation at Risk* in 1983 to Ernest Boyer's call for a revamping of teacher education in 1988, the quality of our schools has received attention from local and national politicians, educators, professional organizations and parents. Discussion of issues of "quality of schools" quickly move to "quality of teachers" and onto the "quality of teacher education programs." In looking at the quality of teacher education programs, one of the primary methods of assessment has been the follow-up studies of pre-service teacher education programs as mandated by NCATE Standard 6.1. An important element of these follow-up studies is the measurement of teachers attitudes towards their preparation program.

Research has indicated that about one-half of the teachers in the United States give their preparation program a grade of 'A' or 'B' (Gallup/Phi Delta Kappa Poll 1984). There is also a general feeling that teacher preparation programs "could not completely prepare prospective teachers

for the real world of teaching" (Applegate et al., 1977).

In order to meet the expectations of the public for quality schools and quality teachers, the assessment of teacher attitudes towards their preparation program is crucial in the re-design and improvement of teacher preparation programs. However, the mere letter grade of "A" or "C" does not provide enough information to effect such change. What is needed is to look at the factors which influence these ratings and examine whether they change after one year in the teaching profession.

#### Need for the Study

Follow-up studies of teacher preparation programs are critical to administrators who must make decisions regarding improvements or changes to such programs. Although there has been research about problems associated with the beginning teacher (Birdwell, 1989; Veenman, 1984; Johnston and Ryan, 1980), the examination of factors that influence ratings of adequacy of teacher preparation programs after one year of teaching remain relatively unexamined. In using these evaluations for decision-making, the basis for these attitudes is needed. Are the attitudes influenced by the fact that a teacher is satisfied with their current environment or are they influenced by personal factors? If

a teacher had certain job expectations at graduation, does the fact that these job expectations are the same after a year of teaching influence attitudes toward their preparation programs? What about the mere passage of time, does that effect attitudes? This study examines these factors to determine their influence on teachers rating of the adequacy of their preparation program after one year of teaching.

#### Statement of the Problem

In order to develop effective teacher preparation programs, factors related to graduates ratings of adequacy of these programs need to be examined. The problem addressed by this study is the lack of an understanding of certain factors related to the adequacy ratings of the teacher preparation program by graduates of Iowa State who are teaching one year after graduation.

#### Purpose of the Study

The purpose of this study was to conceptualize and test a model to determine if certain factors influence the rating of a teacher education preparation program one year after graduation. These factors include: personal factors such as gender, marital status and graduating GPA; ratings of adequacy at time of graduation; current teaching level;



preparation factors such as satisfaction with student teaching, overall rating of program and self rating of student teaching behavior; congruency in expectations of job characteristics between graduation and one year later; and satisfaction with current position factors.

#### Objectives of the Study

- to develop a conceptual model which identifies relationships between preparation factors, position factors and congruency in job expectations and the rating of the adequacy of the preparation program one year after graduation;
- to test the model;
- to examine changes in adequacy ratings of the teacher preparation program between the year of graduation and first year teaching;
- to examine how similarities (congruency) in job expectations from graduation to one year later, effect adequacy ratings of preparation programs;
- to examine how satisfaction with the teaching environment influences the adequacy rating of the teacher preparation program;
- to examine how certain preparation factors, such as satisfaction with student teaching, overall rating of

program at time of graduation and self rating of student teaching behavior influence the rating of the adequacy of the preparation program one year later.

#### Data Source

A comprehensive model designed to evaluate the Iowa State University teacher preparation program was implemented by the Research Institute for Studies in Education at Iowa State University in 1980. This longitudinal model called for the collection of data from both teacher education students and graduates from the program and at selected times during their preparation and career. Two of the major data collection time periods are the semester of graduation and one year following graduation. Besides the demographic information, these data provide information from students on their attitude towards their preparation program, satisfaction with their current environment and their expectations of the teaching profession. In this study, data collected at time of graduation and one year following graduation will be utilized to study the effects of various factors on the rating of the adequacy of the preparation program one year after graduation.

#### Research Questions

The specific research questions, which are consistent

with the objectives and purpose of this study, to be investigated are:

1. Do personal factors such as gender, marital status or graduating GPA influence the adequacy rating of the teacher preparation programs one year after graduation?
2. Does level of preparation (elementary, secondary) have a relationship to the adequacy rating of the teacher preparation program one year after graduation?
3. Do teachers ratings of the adequacy of the preparation program at graduation have a relationship to how they rate the adequacy of the preparation program one year after graduation?
4. Do certain preparation factors have a relationship to the adequacy rating of the teacher preparation program one year after graduation?
5. Does congruency in job expectations from graduation to one year after graduation have a relationship to the rating of the adequacy of the preparation program one year after graduation?
6. Does satisfaction with their current position have a relationship to the adequacy rating of the teacher preparation program one year after graduation?

### Research Hypotheses

Using the above objectives and research questions, a conceptual model will be developed and tested. From this conceptual model, specific research hypotheses will be developed and tested (see page 23).

### Assumptions of the Study

The following assumptions are used for this study:

1. The survey procedures and data collection methods used by the Research Institute for Studies in Education at Iowa State University are suitable for the testing of this hypothetical model.
2. Teachers have generalized attitudes towards their rating of the preparation program.
3. Teachers have generalized attitudes towards job expectations, satisfaction with their working environment and student teaching.

### Organization of the Study

In Chapter 1, the introduction and basis for the study is presented. In Chapter 2 is the review of the literature. This review includes the theoretical and empirical literature related to the factors which influence attitudes towards teacher preparation programs. The basis for the development of the model and the hypotheses to be examined

will be discussed.

In Chapter 3, the methodology and design of the study is presented. It includes a discussion on the data analysis techniques used in this study.

In Chapter 4, the results of the data analysis are presented. The findings from the testing of each portion of the model are presented and interpreted.

In Chapter 5, a summary of the study is presented as well as a discussion of the results. Recommendations for further studies are presented.

## CHAPTER 2

Research findings indicate that attitudes about teacher preparation programs examined over time, either remain stable or change in positive directions (Applegate et al., 1980).

This is important information but there is a need for more definitive information. This review of the literature will start with the theoretical framework for this model and review the various components of the model.

## Theoretical Framework

There are a number of somewhat similar theories associated with the basis for this model, which Freedman groups as "cognitive consistency theory". Lewin, Heider, Abelson, Festinger, Osgood and others (Freedman, 1970) are all associated with cognitive consistency theories and the basic notion behind all of them is the same. Freedman states, "they begin with the assumption that there is a tendency for people to seek consistency among their cognitions and that this is a major determinant of attitude formation." Two particular aspects of this cognitive consistency framework are of special importance in the development of this model: Fritz Heider's balance theory and Leon Festinger's theory of cognitive dissonance.

### Balance Theory

This approach to cognitive consistency, proposed by Fritz Heider (1958) and others, has been called the balance theory. The major point of this and of all cognitive theories is that there is a tendency for a cognitive system to move from a state of inconsistency to a state of consistency. Freedman et al. (1970), state "In particular, the balance model states that a system in a state of imbalance will move toward a state of balance; either of the imbalance states will move toward one of the balanced states." Theoretically, this approach could apply to any number of objects. This is convenient for the study of attitudes because it can deal with like objects, i.e., if I feel good about my job, I'll feel good about my training that got me my job.

Krech et al. (1962), point out that "Balance theory would predict that an attitude which is in a state of imbalance with other attitudes in a cluster (or model) will tend to move in the direction that will balance the system."

### Cognitive Dissonance Theory

Another theory from the social psychology field used in the model is cognitive dissonance theory. The theory of cognitive dissonance formulated by Festinger (1957) provides

an excellent conceptual framework from which to examine teachers expectations of the teaching profession at the time of graduation and then again after teaching for one year. The basic notion of the theory of cognitive dissonance is that there is a tendency toward cognitive consistency. One critical aspect of the theory is its definition of inconsistency, which is dissonance.

Mahan and Lacefield (1978), who used the theory in studying education attitude changes during student teaching, sum up the theory as follows, "In its essential form, the theory holds that as a person experiences prolonged cognitive dissonance, he will very likely change his attitudes so as to reduce the dissonance." An attitude can be defined as a predisposition to act in certain general ways. Cognitive dissonance is a "uncomfortable" state of being arising when a person is aware that he is behaving in a manner disparate with his own attitude, with his own self-image. It is a form of existential guilt. Assuming he can not change the situation, the person will change his attitude to reduce the dissonance."

Its application to this model is that if there is congruency in job expectations between graduation and after one year of teaching, that congruency will effect the rating of the preparation program. Likewise, if there is



dissonance between what is expected in the job and what it turned out to be, the rating of the preparation program will be effected in an effort to reduce the dissonance.

#### Adequacy Rating - One Year After Graduation

The transition from teacher training to the first teaching job is often a dramatic and sometimes traumatic one. Veenman (1984) refers to this "reality shock" as "the collapse of the missionary ideals formed during teacher training by the harsh and rude reality of everyday classroom life." Muller-Fohrbrodt, Cloetta, and Dann (1978) distinguished five indicators of reality shock:

- (1) perception of problems
- (2) changes in behaviors
- (3) changes in attitudes
- (4) changes of personality
- (5) leaving the teaching profession.

A number of longitudinal studies (Hoy, 1968; McArthur, 1981) using various instruments to measure attitude change support the evidence of the changes in attitudes from conservatism/custodialism to progressivism/ humanism and again to conservatism/custodialism. With this kind of documented change, especially during the first year of teaching, why are there not similar changes in attitudes

towards teacher preparation programs?

Recent research has indicated that about one-half the teachers in the United States gave their teacher education programs a grade of "A" or "B" and that the same proportion agree that the training and preparation they received did a good job of preparing them for the classroom (Gallup/Phi Delta Kappa Poll, 1984).

Applegate found that when data on attitudes about teacher preparation programs were examined over time, expressed attitudes either remained stable, or changed in a positive direction. The general feeling in Applegate's study was that teacher education programs "could not completely prepare a prospective teacher for the real world of teaching" and that teacher training program fall short of preparing teachers "for the realities of classroom life". These findings are not viewed as short-coming of preparation programs, but reflect the feeling that "there are some things that you just cannot teach" (Applegate et al., 1977). Johnston and Ryan (1980) found that in the analysis of first year teacher (FYT) perceptions of their professional preparation two themes: " a realization of the limits of teacher preparation programs and a valuing of first-hand experiences."

This lack of change in attitudes about teacher

preparation programs, taken together with the documented changes in attitudes experienced by first year teachers (Veenman's reality shock) creates an opportunity for the researcher to look at variables which effect this consistent rating of preparation programs by FYT.

#### Position Factors

The importance of satisfaction with certain position factors in this model is to determine its impact on how teachers rate their preparation program after one year of teaching. Dissatisfaction with position factors may be evident most dramatically in a teacher's decision to leave teaching. Rosenholtz (1989) found evidence that the extent of work place dissatisfaction can be used successfully to account for attrition from the teaching profession. Although beginning teachers reported many problems in their first year of teaching, they did not seem to be dissatisfied with their general working conditions. In studies by Thompson (1971), Taylor and Dale (1971), Edmonds and Bessai (1979), Tisher et al. (1979), Broeders (1980) and deVoss and Dibella (1981), more than 80% of the beginning teachers were satisfied with their school.

In looking at specific aspects of job satisfaction, the category of 'salary/fringe benefits' is usually the least

satisfying (Birdwell, 1989) followed by 'general working conditions' and 'opportunity for profession advancement'. In studies by Miller (1971) and deVoss and Dibella (1981), components of satisfaction of beginning teachers were opportunities to work with children, constantly learning about teaching, enjoyment in teaching a subject, doing something worthwhile and vacations. These findings are consistent with Birdwell (1989) who found in a study of 1410 graduates of the teacher preparation program at the Tennessee Technological University between 1973 and 1989 that when asked "which feature of your current job do you find most satisfying?", 33% of all respondents answered "interaction with students". Despite these reactions to specific aspects of the profession, Bouchard and Hull (1970) found that 71% reported that they would choose a teaching career again. Regarding satisfaction with their work, 75% noted, "satisfaction depends on one's ability to motivate students to learn."

This same positive reaction was found by Birdwell (1989) who found "When asked 'If you had it all to do over again, would you still enroll in a teacher education program?'", 66% said they definitely or probably would, 25% said they probably would not, and 9% said they definitely would not. Of those who graduated in 1973, 56% of the bachelor's degree

subjects indicated they would definitely or probably still enroll, compared to 81% of the bachelor's degree subjects who graduated in 1988.

A more detailed approach to satisfaction with certain position factors for teachers is Chapman and Lowther's (1982). They suggest that career satisfaction is influenced by:

- 1) a teacher's personal characteristics
- 2) a teacher's skills and abilities
- 3) the criteria the teacher uses to judge his or her professional success and
- 4) professional accomplishments.

Chapman and Lowther's conceptual framework is based on Holland's (1973) theory of vocational choice which states that vocational satisfaction, stability, and achievement depend on the congruence between one's personality and the environment in which one works. Chapman and Lowther also reference Super and Hall (1978) who contend that people who feel challenged by their work, who have autonomy in carrying out their tasks, and who feel adequately rewarded are more apt to persist in and be satisfied with their careers.

#### Congruency in Job Characteristics

Much has been written concerning dissonance between what

takes place in teacher preparation programs and what the first year teacher finds as they enter the profession (Burlingame, 1972; McCaleb, 1979; Tabachnick, 1980). Supposedly when pre-service teachers are exposed to the realities of in-service teacher practices, "a kind of pedagogical schizophrenia results" (Templin, 1979, p. 483). Those who find that the reality of the job fails to meet their expectations are likely to experience dissonance. The results of a study conducted by Louis Harris and Associates for the Metropolitan Life Insurance Company (1985) indicate that more than 60% of those who left the teaching professions reported that the prestige in teaching failed to meet their expectations.

In the past, quantitative research on the first year teacher has focused on problems experienced during the first year of teaching. One aspect of this research has to do with teachers attitudes toward students. An instrument used in this line of research is the Minnesota Teacher Attitude Inventory (MTAI), which is designed to measure "those attitudes of the teacher which predict how well he or she will get along with pupils in interpersonal relations, and inherently how well satisfied he will be with teaching as a vocation" (Callis, 1950). A study using the MTAI by Lagana (1970) demonstrates what the researcher calls "the curve of

disenchantment". The graph-line moves upward during pre-service training as the prospective teacher's attitudes toward students becomes more positive. However, during the first four months of the first year, the line takes a sharp dip, reflecting a strong change in attitude toward students. This change in attitude toward students during the first year is evident of other changes during that first year.

In 1983, Thompson, Warren, Dilts and Blaustein did a one-year follow-up study of 130 Iowa State University teacher education graduates. They compared the ratings of importance of certain job characteristics at the time they graduated with the extent to which these same characteristics were provided for in their current employment one year later. Both the teaching and nonteaching graduates reported negative discrepancies between their expectations and the reality of the job in all areas.

Goodlad found in a 1984 study that teachers who reported that the reality of the job met their expectations were more likely to express career fulfillment and to report that they would choose to enter the teaching profession again.

#### Preparation Factors

The major component of the 'preparation factor' in this

model is the student teaching experience, which is believed to be the most important part of the preparation program (Griffin, 1982). Student teaching not only shapes a student attitudes about the teaching profession but the feeling of satisfaction that student teachers derive from their student teaching experience, can be an important determinant of their decision to enter the teaching profession (Hays, 1982). Theoretically referred to as occupational socialization (Burlingame, 1972), the student teaching experience is thought to consist of a series of processes directed at transforming student teachers into confident, mature practitioners.

What could also result is a lower self-concept rating, increased self-depreciation, lower expectations of pupils, and lower aspiration for one's self in the teacher role (Gettone, 1980; Tabachnick, 1980). However, most researchers have found that student teachers' self-assessed competence increases significantly as a result of the student teaching experience (Chiu, 1975; Fletcher & Dotson, 1976; Gaede, 1978).

The importance of a positive student teaching experience on career choice was demonstrated in studies by Chapman (1984) and Williams (1985). In a study designed to examine which factors predicted satisfaction with student teaching



of 741 1982-84 Iowa State University teacher education graduates, Williams reported that she found the best predictor of a teacher education graduate's satisfaction with teaching as a career, was his/her self-evaluation of their own teaching performance. She also found that student who spent eight weeks or less student teaching were less satisfied with their student teaching experience and with teaching as a career than those who spent more than eight weeks student teaching.

#### Level of Preparation

Teaching level is included in the model because past research indicates a difference between elementary and secondary teachers with regard to satisfaction with the teaching profession (Bentzen, Williams and Heckman, 1980). The researcher is hypothesizing that this difference will carry over to the evaluation of their preparation program after one year of teaching.

The 1980 Teacher Opinion Poll (NEA, 1980) found that secondary teachers were somewhat more likely than elementary teachers to report that they were dissatisfied with teaching and that if they had to do it over again, they would not become teachers. Another study by Goodlad (1984), reported that secondary teachers are less likely to be satisfied with

teaching than elementary teachers.

An extensive study on differences of satisfaction by teaching level was done by Chapman (1983). The results of secondary analysis of data collected by three public universities in Indiana of alumni, revealed that the relationship of specific skills and abilities to job satisfaction appears to be different for elementary and high school teachers. Elementary teachers assigned more importance to recognition by administrators and supervisors, but less importance to recognition by peers.

The question that these differences might carry over to the rating of their preparation program will be tested by this model.

#### Personal Factors

The importance of studying teacher development has been formally recognized by the education profession as evidenced by accreditation standards required by NCATE. These standards state that evaluation of teacher education programs should be conducted and should utilize data collected both at the pre-service level and after the graduate enters the teaching profession. Much of the comparison in this research uses three major variables under the heading of personal factors: gender; marital

status and academic ability/achievement (GPA).

While these three variables seem to be consistently involved in the analysis of teacher development studies (Lortie, 1975) the results of such analysis are equally inconsistent.

Stone (1964) found that male beginning teachers experienced fewer problems than female beginning teachers. On the other hand, Grantham, (1961), Taylor and Dale (1971), and Williams (1976) reported no difference between genders. Adams and Martray (1980) and Adams (1982) noted that secondary teachers who had higher grade point averages reported more problems with teaching. Chapman (1984), however, found that grade point average did not significantly explain differences between those teacher education graduates who decided to enter teaching and those who did not enter teaching upon graduation, or those who remained in the profession and those who did not.

Lortie (1975) found single women expressing the most dissatisfaction with teaching as a profession, whereas, Pavalko (1970) reported that he found significantly more single than married teachers remained in the profession. Chapman (1983) found that those who taught continuously were more likely to be single than those who never entered teaching or who left teaching within the first five years.

In summary, there appears to be sufficient reason for including these variables in the model for further examination of their influences in teacher development studies.

#### Conceptual model and research hypotheses

The purpose of this section is to present and explain the conceptual model developed for this study and present the research hypotheses. The path model was construed that summarizes the relationship among the various independent variables to be investigated and their direct and indirect effect on rating of adequacy one year after graduation (dependent variable). The model is based on the theoretical and empirical literature previously discussed in this Chapter and is presented in Figure 1.

The major hypotheses behind the connecting paths are as follows:

Hypothesis 1 - There is a significant relationship between the level of satisfaction teachers express with their current position and their adequacy rating of the teacher preparation program one year after graduation.

Hypothesis 2 - There is a significant relationship

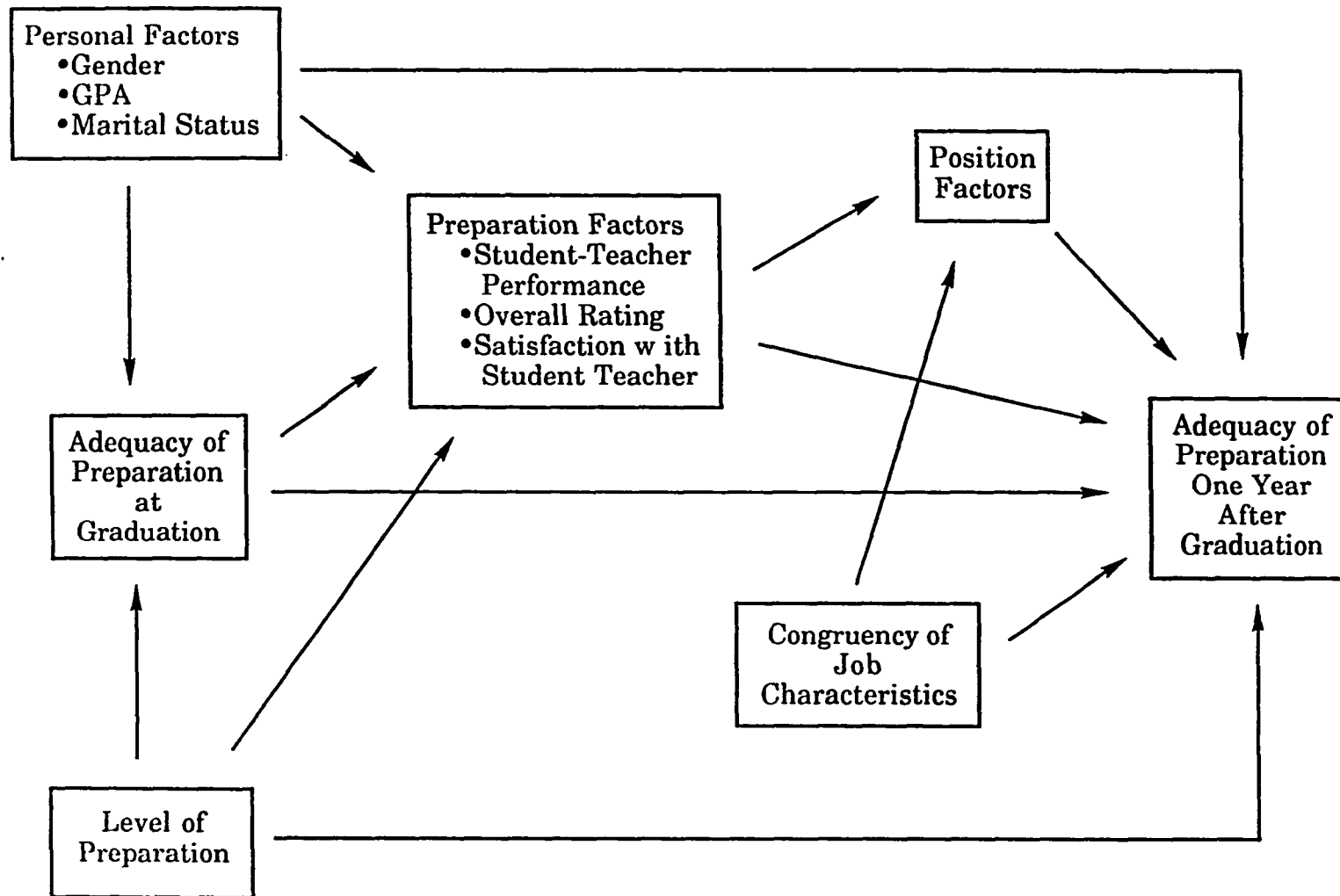


Figure 1. Hypothetical Model

between teachers who exhibit congruency in their job expectations from graduation to one year after graduation and their adequacy rating of the teacher preparation program one year after graduation.

Hypothesis 3 - There is a significant relationship between certain preparation factors, such as satisfaction with student teaching, student teaching performance and overall rating of the teacher preparation program and adequacy rating of the teacher preparation program one year after graduation.

Hypothesis 4 - There is a significant relationship between level of preparation (elementary or secondary) and adequacy rating of the teacher preparation program one year after graduation.

Hypothesis 5 - There is a significant relationship between certain personal factors, such as gender, graduating grade point average and marital status, and adequacy rating of the teacher preparation program one

year after graduation.

**Hypothesis 6 - There is a significant relationship between the rating of adequacy of the teacher preparation program at the time of graduation and the rating of adequacy of the teacher preparation program one year after graduation.**

### CHAPTER 3. METHODS

This study was designed to conceptualize and test a model to examine how certain factors influence the rating of the adequacy of the preparation program by teacher education graduates. In this chapter, the data source, the instruments used to collect the data, the graduates and the sample will be described. The variables included in the study will be operationally defined, and how they were measured will be discussed. The methods of data analysis are also discussed.

#### Data Source and Collection

All the data used in this study were collected from a comprehensive and on-going research project conducted by the Research Institute for Studies in Education (RISE). The expressed purpose of this research is to evaluate, modify and improve the programs for the preparation of educational personnel at Iowa State University. Various topics have been examined using data collected by RISE. In 1985, Williams examined student teaching satisfaction and in 1987, Sweeny developed and tested a longitudinal model designed to examine factors that influence career paths. Boatwright (1988) conducted a factor analysis of job characteristics which was used in this study. The reader is referred to the



Kemis and Whiteford publication of September 1989 for abstracts of RISE sponsored projects. The hypothetical model used in this study, has not been tested in any of the previous studies.

Survey research was used to collect data from students and graduates of the teacher education program at various stages in their careers. This study used data collected from surveys at two data collection points (graduation from the teacher preparation program and one year following graduation), as well as information about the graduate collected from university records.

In conducting each of the surveys, RISE followed the procedures for conducting a mail survey recommended by Dillman (1978). At each data collection point, those surveyed were mailed a copy of the questionnaire with a cover letter explaining the purpose of the survey and requesting their participation (see Appendix B). Two weeks later, a reminder postcard, was mailed to those who did not respond to the initial mailing. Following an additional two weeks, another copy of the questionnaire as well as another cover letter requesting their participation were mailed to those who did not respond to the previous two mailings. All surveys in the project received approval from the Iowa State University Committee on the Use of Human Subjects in Research.

### Instruments

The teacher education graduates included in this study completed two survey instruments (at graduation and at one year following graduation). The two instruments were developed by RISE personnel to be used in the on-going research project to evaluate, modify and improve the Iowa State University teacher preparation program.

The "Teacher Education Program Graduate Survey" was administered at time of graduation. The items from this survey that provided data relevant to this study were those that asked the subjects to report:

1. perceived adequacy of their preparation program in specific areas
2. marital status
3. satisfaction and rating of various aspects of student teaching
4. desired job characteristics
5. self-evaluation of themselves as a teacher
6. overall rating of the program

The "One Year Follow-up Teacher Education Graduate Survey" was administered the year following graduation. The items from the questionnaire that provided data relevant to this study were those that asked the subjects to report:

1. perceptions regarding the adequacy of preparation in specific areas
2. the extent to which specific job characteristics were provided in their current job
3. current employment (teaching/not teaching)
4. the importance of certain factors in their decision to accept their current teaching position
5. general satisfaction with their current job
6. satisfaction with various aspects of teaching.

The data from the permanent record used in the study included:

1. gender
2. GPA at graduation from the preparation program
3. teaching certification level.

#### Sample

This study includes all graduates of Iowa State University teacher preparation program during the academic years of 1986-1987 and 1987-1988 (N=735). The number of graduates returning both questionnaires (at graduation and one year after graduation) reduced this number to 272. Of the 272, this studies examines the 180 graduates who were teaching at the time of the one year follow-up study.

### Characteristics of Graduates and Sample

The following table shows selected characteristics of the graduates and the sample.

Table 3.1. Characteristics of graduates and sample

Characteristic	Graduates			Sample		
	Mean	SD	N	Mean	SD	N
GGPA	3.09	.40	735	3.21	.38	180
HSR	25.76	18.18	526	21.07	16.22	133
Gender	N	%		N	%	
Female	552	75.1		147	81.7	
Male	183	24.9		33	18.3	

### Measures

In this section, the method of measurement of each of the variables examined in this study will be discussed. The dependent variable, adequacy rating of preparation program for classroom teachers measured one year after graduation will be presented first followed by the independent or determinant variables.

### Dependent Variable

#### Adequacy rating of preparation (one year after graduation)

The indicator of perceived adequacy of preparation is measured at both survey points: graduation and one year following graduation. At each survey point, graduates were asked to rate the adequacy of their professional education program in 34 specified preparation areas. The response categories and the scores assigned to each were "very adequate" (5), "adequate" (4), "neutral" (3), "inadequate" (2), and "very inadequate" (1). A sixth response category, "not applicable" was included to provide graduates with the opportunity to indicate that it was not appropriate to rate their adequacy of preparation in a specific area. This category was scored 8 and these responses were coded as missing.

A comprehensive statistical analysis of these 34 preparation areas has recently been done by RISE (Kemmis and Warren, 1989) resulted in five (5) reliable composites:

1. planning and delivery instruction
2. interpersonal relationships and individual difference
3. assessing and dealing with learning problems
4. testing and evaluation students

5. developing a teaching style.

The results of the factor analysis, reliability coefficient alpha, and average inter-item correlations appear in Table A.1 of Appendix A. The mean and standard deviation for the item in the composite appear in Table A.2 of Appendix A.

Since a primary task of teaching is instruction, the composite "planning and delivering instruction" was used for this variable. Presented in Table 3.2 is the mean, standard deviation and number of cases for the dependent variable.

Table 3.2. Rating of adequacy of preparation program one year after graduation

	Mean	SD	N of Cases
Adequacy rating	3.64	.64	178

### Independent Variables

#### Personal factors

Three indicators were considered under the category personal factors: gender, graduating grade point average (GGPA) and marital status at time of graduation. Presented in Table 3.3 are the number of respondents for the gender and marital status indicators, as well as the mean and

standard deviation for the GGPA indicator.

Level of preparation

This indicator was obtained from Iowa State University graduates' permanent record. It was operationally defined as the level of teaching certification. For the purpose of this study, categories of K through 12 and 7 through 12 were recoded to "secondary", and N through K and K through 6 were recoded to "elementary." Table 3.4 presents the number and valid percent in each group.

Adequacy rating of preparation (at graduation)

The respondents also rated adequacy of preparation at graduation. The items were the same, allowing for direct comparison with the dependent variable (adequacy rating of preparation - time 2). The composite variable, planning and delivering instruction, was used as the measure for adequacy of preparation at time 1 (see Tables A.1 and A.2 in Appendix A).

Table 3.3. Personal factors

	Number	Valid Percent	
<b>Gender</b>			
Female	147	81.7	
Male	33	18.3	
<b>Marital Status</b>			
Single	128	71.1	
Married	52	28.9	
	Mean	SD	N of Cases
GGPA	3.21	.38	180

Table 3.4. Level of preparation

	Number	Valid Percent
Elementary	110	61.1
Secondary	70	38.9



Presented in Table 3.5 are the means and standard deviation and number of cases for the variable.

Table 3.5. Rating of adequacy of preparation program at graduation (Time 1)

	Mean	SD	N of Cases
Adequacy rating	3.72	.57	180

#### Preparation factors

Three indicators are included in the category preparation factors:

1. respondent's satisfaction with student teaching;
2. respondent's overall rating of teacher preparation program and;
3. respondent's self-rating of their teaching performance.

Indicators one and two are items asked in the questionnaire administered at time of graduation and indicator 3, self rating of teaching performance, is the composite of two items related to student teaching performance and one item addressing teaching potential.

### Satisfaction with student teaching

An item included in the questionnaire administered at the time of graduation asked graduates to indicate how satisfied they were with teaching as a career based on their student teaching experience. The response scale was "very satisfied", "satisfied", "neutral", "dissatisfied", and "very dissatisfied". These responses were scored 5, 4, 3, 2, and 1 respectively. The mean and standard deviation are presented in Table 3.6.

### Overall rating of program

At graduation graduates were asked to rate the quality of the Teacher Preparation Program at Iowa State University on a scale of 0 (very poor) to 10 (very high). The mean and standard deviation are presented in Table 3.6.

### Self rating of teaching performance

At graduation, respondents were asked to give their perceptions of their teaching performance on 16 criteria. A comprehensive statistical analysis of these 16 criteria (Kemis and Warren, 1989) resulted in two (2) reliable composites: Learning Environment Performance and Teacher Behavior Performance. The results of the factor analysis, reliability coefficient alpha, and average inter-item correlations appear in Table A.3 of Appendix A. A third

Table 3.6. Mean and standard deviation of preparation factors

	Mean	SD	N of Cases
Satisfaction with student teaching	4.49	.68	176
Overall rating of program	7.10	1.61	176
Self-rating of teaching performance	25.55	2.38	178

item was added to these two composites to make up this measurement. At graduation, respondents are asked what kind of teacher they feel they will be on a scale of: "inadequate" (1), "below average" (2), "average" (3), "better than average" (4), and "excellent" (5).

The self rating of teaching performance measurement is the sum of the means of each of the three items divided by the standard deviation in order to provide equal weighting. The mean and standard deviation for the item in this composite appear in Table A.4 of Appendix A. The means and standard deviations for the three indicators of Preparation Factors are presented in Table 3.6.

#### Congruency of job characteristics

Congruency of job characteristics is operationally defined as the difference between job expectations at the

time of graduation and the extent those expectations were met one year following graduation. Using the scale "Very Important" (5), "Important" (4), "Neutral" (3), "Unimportant" (2), and "Very Unimportant" (1), respondents at the time of graduation were asked how important is it that a job provide them with the 18 different characteristics. Using a similar scale of "all of the time" (5), "most of the time" (4), "some of the time" (3), "seldom" (2), and "never" (1), follow-up respondents were asked to what extent their current job provided them with the same 18 characteristics. Total mean scores and standard deviations appear in Table 3.7. Mean and standard deviations of the specific 18 characteristics are presented in Table A.5 of Appendix A. Regression analysis provided the information on the residuals also appearing in Table 3.7. A congruency score was computed using residual analysis ( $Y = b(TM1) + b_0$ ) to reflect the amount of discrepancy between the observed and predicted values (Kleinbaun/Kuper).

#### Position factors

Four (4) composites comprise the overall composite called Position Factors. The four individual composites are: Satisfaction with the working environment; Importance

of external factors (i.e., salary, size of organization); Importance of internal factors (i.e., reputation of organization) and General satisfaction with respondents current job. These items are measured one year after graduation. Mean and standard deviation of items included in the position factors composite are in Table A.7 of Appendix A.

Satisfaction with the working environment

Satisfaction with the working environment is measured by indicators that were derived from responses to 19 items that one year teachers completed. Respondents indicated their satisfaction with each of the 19 specific employment factors. Response categories and scores for these 19 items were "very satisfied" (5), "satisfied" (4), "neutral" (3), "dissatisfied" (2), "very dissatisfied" (1). The number of

Table 3.7. Congruency of job characteristics

	Mean	SD	N of Cases
Job Characteristics- Graduate	4.14	.36	180
Job Characteristics- One year after graduation	3.76	.49	166

b = .267814

constant = 2.655431

characteristics was reduced from 19 to 3 as a result of factor analysis procedures previously conducted by RISE. The results of this factor analysis appear in Table A.6 of Appendix A. The means and standard deviation for items in this composite appear in Table A.7 of Appendix A.

Of the three factors identified through factor analysis: extrinsic, intrinsic, and evaluation, only extrinsic was used for the purpose of the study. Presented in Table 3.8 are the mean and standard deviations for the factor.

Table 3.8. Mean of standard deviation of indicators included in the variable position factors

Indicator	Mean	SD	N of cases
Satisfaction with the working environment	3.51	.69	165
Importance of Position Factors - external	3.52	.81	163
Importance of Position Factors - internal	3.68	.98	160
General Satisfaction with current job	6.95	2.18	168

Importance of position factors - external and internal

Importance of position factors - external and internal is derived from responses to eight items where currently

employed respondents were asked to rate the importance of the eight items in their decision to accept their current position. Response categories and scores for these eight items were "Very Important" (5), "Important" (4), "Neutral" (3), "Unimportant" (2), "Very Unimportant" (1). The eight items were reduced to two characteristics (External and Internal) as a result of factor analysis procedures previously conducted by RISE. The results of the factor analysis appear in Table A.6 of Appendix A. The mean and standard deviation for these factors are presented in Table 3.8.

#### General satisfaction with current job

The final item included in the Position Factor composite is general satisfaction with current job. Teachers rated their general satisfaction with their current job on a scale from 0 (Very low) to 10 (Very High). The mean and standard deviation are presented in Table 3.8.

The Position Factor variable is a composite of these four items. The measurement is the sum of the means of each of the 4 items divided by the standard deviation in order to provide equal weighting. The mean and standard deviation for this composite appears in Table A.7 of Appendix A.

## CHAPTER 4

Presented in Chapter Four are the results of the testing of the theoretical model. The purpose of this analysis was to determine which factors in the model influence the adequacy rating of the teacher preparation program one year after graduation.

Six empirical hypothesis were formulated to test portions of the model. These six hypotheses were tested using data collected from a sample of 180 Iowa State University teacher education graduates who graduated during the academic years of 1986-87 and 1987-88.

This chapter is divided into three sections. Presented in the first section are the correlation data. In the second section are the results of the regression runs, using both stepwise and forced enter methods. Presented in the third section are the results of the testing of the six hypothesis.

#### Correlation Data

Table 4.1 presents the correlation data of all variables in the model. An examination of the relationships of the variables in the model can provide a better understanding of the model.



Table 4.1. Correlations, means and standard deviations for variables in the model

Variables	1	2	3	4	5
<b>Personal Factors</b>					
1. Gender	1.00				
2. GPA	-.14*	1.00			
3. Marital Status	.01	.17*	1.00		
4. Adequacy Rating1	-.08	.03	.04	1.00	
5. Teaching Level	.53***	-.22***	-.11	-.16*	1.00
<b>Preparation Factors</b>					
6. Satis/w Stu.Tea.	-.10	.16*	.28***	.18**	-.32***
7. Overall Rating	-.12	.11	.10	.61***	-.20**
8. Stu.Teach. Perf.	.01	.16*	.00	.27***	-.17*
9. Congruency of JC	-.00	.08	-.03	.17*	-.09
10. Position Factors	-.00	.06	-.00	.34***	-.07
11. Adequacy Rating 2	-.13*	.03	.09	.58***	-.29**

\*p < .05.

\*\*p < .01.

\*\*\*p < .001.

6	7	8	9	10	11	Mean	SD	N of Cases
						1.18	.39	180
						3.21	.39	180
						1.29	.45	180
						3.72	.57	180
						1.39	.49	180
1.00						4.49	.68	176
.14	1.00					7.10	1.61	176
.35***	.17*	1.00				25.55	2.38	178
.14*	.13*	.05	1.00			.00	.48	166
.19**	.29***	.11	.68***	1.00		16.45	2.97	158
.17*	.54***	.16*	.20**	.38***	1.00	3.64	.64	178

The dependent variable, adequacy rating one year after graduation (Adequacy Rating 2) is positively related significantly with all variables in the model except GPA and marital status. The only other variable with as many significant positive relationships with other variables is satisfaction with student teaching. Satisfaction with student teaching is not positively related significantly to overall rating of the program and gender.

The variable least related to other variables in the model is marital status which is only significantly related to GPA and satisfaction with student teaching.

#### Test of Proposed Model

In order to ascertain the theoretical validity of the hypothesized path model, multiple regression equations were calculated. To put the model to more rigorous test, both the forced entry mode and the stepwise mode for entry of the independent variables was used. For each mode, 7 separate multiple regression analysis were required. The standardized regression coefficients and their respective standard error are shown in Table 4.2 for each analysis. A .10 significance level was used for regression coefficient because the study is an exploratory testing of a theoretical model. Adjusted R squares are also presented to indicate

Table 4.2. Continued

Dependent Variable	Independent Variable	Enter Mode				Stepwise Mode			
		B	SE	Prob	ADJ R2	B	SE	Prob	ADJ R2
	GPA	--	--	--		--	--	--	
	Gender	--	--	--		--	--	--	
Congruency of Job Characteristics	Student Teaching Perf.	--	--	--	.00	--	--	--	.01
	Gender	--	--	--		--	--	--	
	Marital Status	--	--	--		--	--	--	
	Overall Rating of Prog.	--	--	--		--	--	--	
	GPA	--	--	--		--	--	--	
	Satis. with Stud. Teach.	--	--	--		--	--	--	
	Adequacy Rating (GRAD)	--	--	--		.142	.07	.07	
	Teaching Level	--	--	--		--	--	--	
Position Factors	Congruency of Job Char.	.625	.37	.00	.50	.633	.36	.00	.51
	Student Teaching Perf.	--	--	--		--	--	--	
	Gender	--	--	--		--	--	--	
	Marital Status	--	--	--		--	--	--	
	Overall Rating of Prog.	--	--	--		--	--	--	
	GPA	--	--	--		--	--	--	
	Satis. with Stud. Teach.	.143	.30	.04		.100	.25	.09	

Table 4.2. Standardized regression coefficients, standard errors (SE), probability and R squares of all significant paths (0.10 level) for forced and stepwise modes

Dependent Variable	Independent Variable	Enter Mode				Stepwise Mode			
		B	SE	Prob	ADJ R2	B	SE	Prob	ADJ R2
Adequacy Rating at Graduation	Teaching Level	-.159	.11	.08	.00	-.156	.09	.04	.02
	Marital Status	--	--	--		--	--	--	
	GPA	--	--	--		--	--	--	
	Gender	--	--	--		--	--	--	
Student Teaching Performance	Teaching Level	-.178	.43	.05	.09	--	--	--	.08
	Marital Status	--	--	--		--	--	--	
	Adequacy Rating (GRAD)	.247	.31	.00		.261	.30	.00	
	GPA	.134	.47	.08		.142	.45	.05	
	Gender	.145	.53	.10		--	--	--	
Overall Rating of Program at Graduation	Teaching Level	--	--	--	.39	-.111	.20	.07	.37
	Marital Status	--	--	--		--	--	--	
	Adequacy Rating (GRAD)	.589	.17	.00		.587	.17	.00	
	GPA	--	--	--		--	--	--	
	Gender	--	--	--		--	--	--	
Satisfaction with Student Teaching	Teaching Level	-.307	.12	.00	.15	-.280	.10	.00	.16
	Marital Status	.213	.11	.00		.226	.11	.00	
	Adequacy Rating (GRAD)	.123	.08	.08		.122	.08	.09	

Table 4.2. Continued

Dependent Variable	Independent Variable	Enter Mode				Stepwise Mode			
		B	SE	Prob	ADJ R2	B	SE	Prob	ADJ R2
	Adequacy Rating (GRAD)	.180	.38	.02		.216	.31	.00	
	Teaching Level	--	--	--		--	--	--	
Adequacy Rating- One Year after Graduation	Position Factors	.175	.02	.05	.45	.171	.01	.00	.47
	Gender	--	--	--		--	--	--	
	Marital Status	--	--	--		--	--	--	
	Student Teaching Perf.	--	--	--		--	--	--	
	GPA	--	--	--		--	--	--	
	Overall Rating of Prog.	.251	.03	.00		.258	.03	.00	
	Satis. with Stud. Teach.	--	--	--		--	--	--	
	Teaching Level	-.192	.10	.01		-.175	.08	.00	
	Adequacy Rating (GRAD)	.377	.09	.00		.370	.09	.00	
	Congruency of Job Char.	--	--	--		--	--	--	

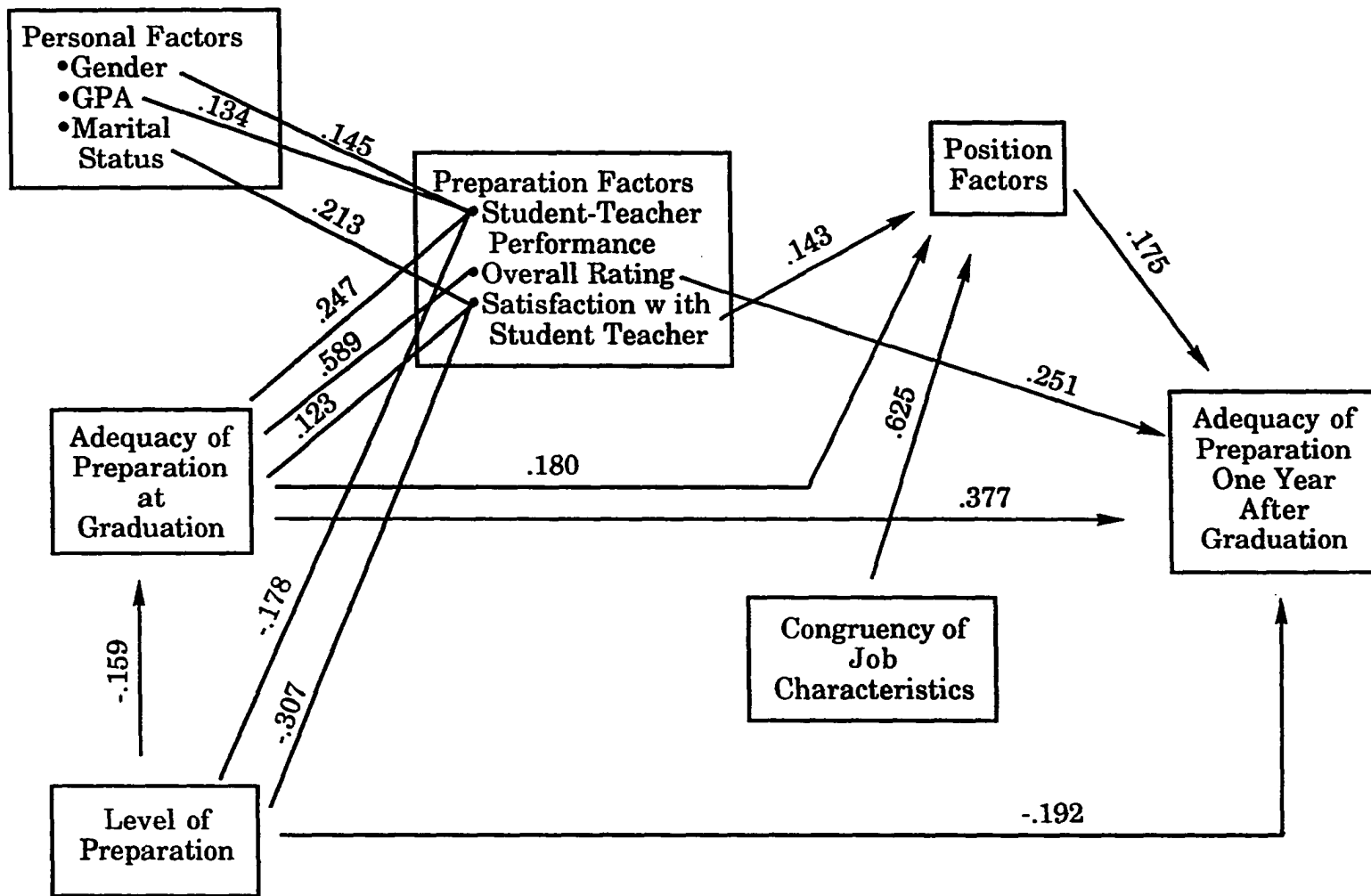


Figure 2. Model obtained using forced entry of variables into regression equation

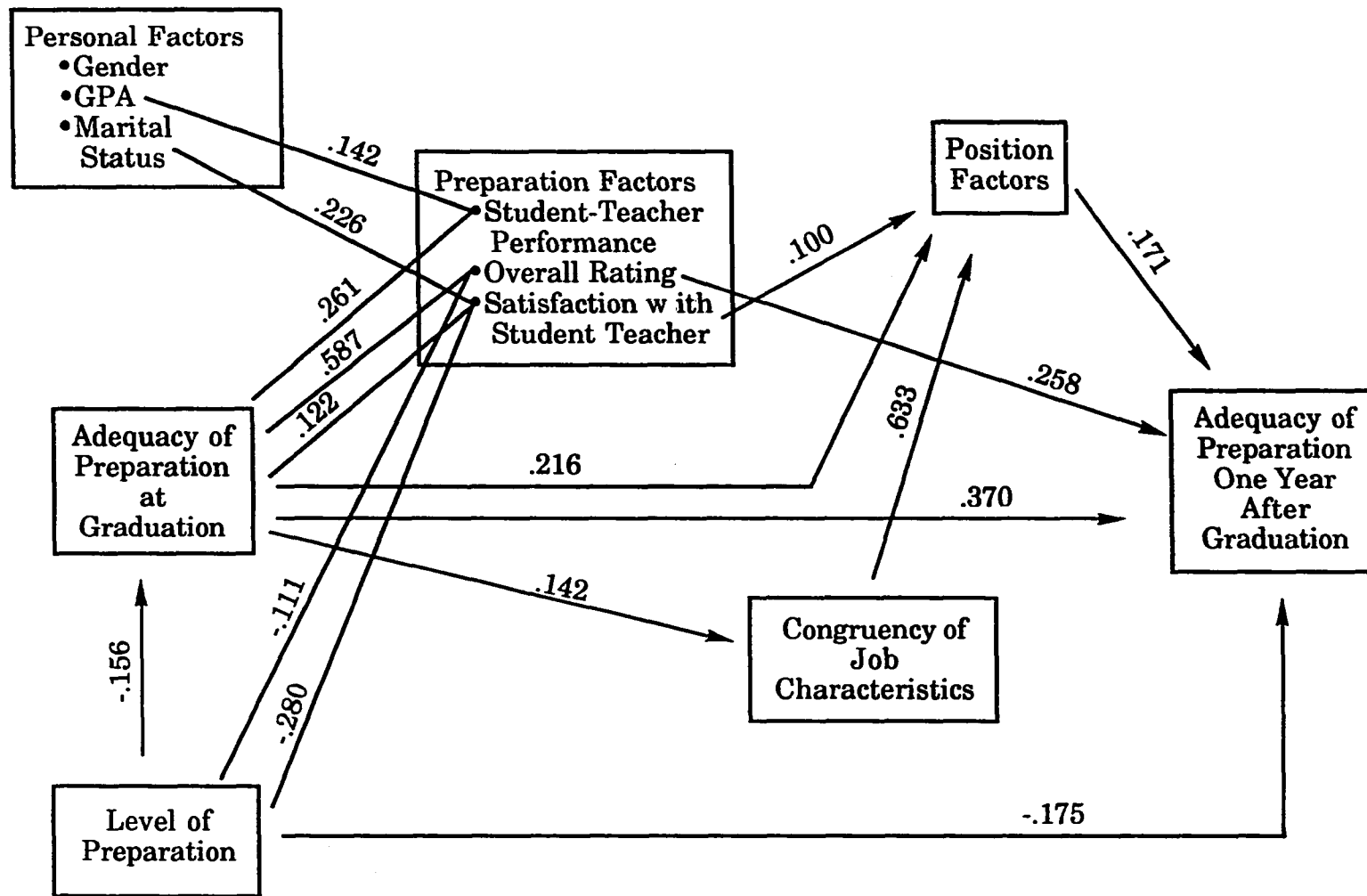


Figure 3. Model obtained using stepwise entry of variables into regression equation



the amount of variance explained by each run. Figure 2 and Figure 3 shows the results of the significant paths of the proposed model. Figure 2 using the forced entry mode and Figure 3 using the stepwise entry mode.

#### Results Entering All Variables (Forced Entry Mode)

Using the forced entry mode with the first endogenous variable, adequacy rating at graduation, the only statistically significant path was from teaching level (-.159), with an adjusted R square of .00 (See Table 4.2).

With the second endogenous variable, student teaching performance, four paths were found to be statistically significant. Teaching level (-.178), adequacy rating at graduation (.247), GPA (.134) and gender (.145) all entered and explained nine percent of the variance (see Table 4.2).

The third endogenous variable, overall rating of the program, only adequacy rating at graduation enter (.589), but explained 39 percent of the variance (see table 4.2).

The fourth endogenous variable, satisfaction with student teaching found three significant paths: teaching level (-.307); marital status (.213); and adequacy rating at graduation (.123). These three variables accounted for 15 percent of the variance (see Table 4.2).

No significant paths were found when congruency of job

characteristics was the fifth endogenous variable (see Table 4.2).

The sixth endogenous variable, position factors, showed three significant paths: congruency of job characteristics (.625); satisfaction with student teaching (.143); and adequacy rating at graduation (.180). Fifty percent of the variance was explained (see Table 4.2).

The seventh and final endogenous variable, adequacy rating one year after graduation, yielded four significant paths. These paths are: position factors (.175); overall rating of program (.251); teaching level (-.192); and adequacy rating at graduation (.377). Forty-five percent of the variance was explained (see Table 4.2).

#### Summary of Forced Entry Mode

A total of 46 paths were run in this forced entry mode analysis. Of the 46, 16 paths were found to be significant at the .10 level (see Figure 2).

#### Results from Entering Variables using Stepwise Mode

In order to isolate the principal explanatory variables, the multiple regression analysis was redone using the stepwise mode of entry for independent variables. The stepwise procedure allows variables selected for analysis to enter the equation one at a time, with an F to enter  $\geq 1.0$

and an  $F$  to remove  $\leq 1.0$  (SPSSX default values). Wilks' Lambda, a statistic which takes into account both the differences between groups and the homogeneity within groups, was used to determine the point at which the entry of an additional variable would not significantly change the  $F$ -approximation. The resulting path diagram is depicted in Figure 3.

Using the stepwise mode with the first endogenous variable, adequacy rating at graduation, the only variable which entered was teaching level (-.156) and explained 2 percent of the variance (see Table 4.2).

With student teaching performance as the endogenous variable, two variables entered: adequacy rating at graduation (.261); and GPA (.142). They explained 8 percent of the variance. The third endogenous variable, overall rating of program had two variables enter: teaching level (-.111); and adequacy rating at graduation (.587). These two variables explained 37 percent of the variance (see Table 4.2).

Satisfaction with student teaching, the fourth endogenous variable, had three variables enter: teaching level (-.280); marital status (.226); and adequacy rating at graduation (.122). These three variables explained 16 percent of the variance. With congruency of job

characteristics as the endogenous variable, only adequacy rating at graduation entered (.142) and explained only one percent of the variance (see Table 4.2).

The sixth endogenous variables, position factors, had three variables enter. Congruency of job characteristics entered first (.633), followed by adequacy rating at graduation (.216), and satisfaction with student teaching (.100). The three variables explained 51 percent of the variance (see Table 4.2).

The final endogenous variable, adequacy rating one year after graduation had four variables enter the equation. Adequacy rating at graduation came in first (.370), followed by overall rating of the program (.258), teaching level (-.175) and position factors (.171). These variables explained 47 percent of the variance (see Table 4.2).

#### Summary of Stepwise Method

A total of seven multiple regressions were run with the seven endogenous variables using the stepwise method of entry. Of the possible 46 variables that could have entered the seven equations, only 16 were significant enough to enter at the .10 level. The resulting path diagram is depicted in Figure 3.

### Results of Specific Hypothesis Testing

This section reviews the major hypothesis and reports the specific results for each.

#### Hypothesis 1

There is a significant relationship between the level of satisfaction teachers express with their current position and their adequacy rating of the teacher preparation program one year after graduation.

Result As a result of the correlation run a significant high positive relationship was found between position factors and adequacy rating of the teacher preparation program one year after graduation (.68) (see Table 4.1).

#### Hypothesis 2

There is a significant relationship between teachers who exhibit congruency in their job expectations from graduation to one year after graduation and their adequacy rating of the teacher preparation program one year after graduation.

Result A significant relationship (.20) was found between teachers who exhibit congruency in their job expectations from graduation to one year after graduation and their adequacy rating of the teacher preparation program one year after graduation. The relationship is a low

positive relationship between the two variables (see Table 4.1).

### Hypothesis 3

There is a significant relationship between certain preparation factors, such as satisfaction with student teaching, student teaching performance and overall rating of the teacher preparation program and adequacy rating of the teacher preparation program one year after graduation.

Result All three preparation factors are significantly related to adequacy rating one year after graduation with a high positive relationship found with overall rating of the teacher preparation program (.54). A low positive relationship was found with satisfaction with student teaching (.17) and student teaching performance (.16) (see Table 4.1).

### Hypothesis 4

There is a significant relationship between level of preparation (elementary or secondary) and adequacy rating of the teacher preparation program one year after graduation.

Result A significant moderate positive relationship was found between level of preparation and adequacy rating of the teacher preparation program one year after graduation (.29) (see Table 4.1).

### Hypothesis 5

There is a significant relationship between certain personal factors, such as gender, graduating grade point average and marital status, and adequacy rating of the teacher preparation program one year after graduation.

Result The only personal factor found significantly related to adequacy rating of the teacher preparation program one year after graduation was gender (.13). GPA and marital status were found not to be related (see Table 4.1).

### Hypothesis 6

There is a significant relationship between the rating of adequacy of the teacher preparation program at the time of graduation and the rating of adequacy of the teacher preparation program one year after graduation.

Result A significantly high positive relationship was found between rating of adequacy of the teacher preparation program at the time of graduation and the rating of adequacy of the teacher preparation program one year after graduation (.58) (see Table 4.1).

## CHAPTER 5. SUMMARY, DISCUSSION AND RECOMMENDATIONS

This chapter presents a summary of the study. The major findings are presented and discussed. The discussion includes the theoretical model and the methodology used to test the model. Implications for educational practice and research are also discussed and suggestions for future research are presented.

### Summary

Because follow-up studies of teacher preparation programs are vital to administrators making decisions on how to improve such programs, there was a need for increase understanding of the factors which influence ratings of adequacy of teacher preparation programs. The purpose of this study was to conceptualize and test a model to determine if certain factors influence adequacy ratings of the preparation program one year after graduation.

The literature review provided the basis for the variables included in the hypothetical model, but limited research was found in the field of education on factors which influence these program evaluations. More research was found in the field of social psychology on attitude change and factors which influence such changes and the model relies heavily on such research. There is no shortage



of research and discussion on the problems of education in general and of teacher education in specific. There has been research about the problems associated with beginning teaching, and these studies influenced the development of the hypothetical model.

The model developed for the study hypothesized that adequacy rating one year after graduation would be influenced by:

1. satisfaction with current position;
2. congruency of job expectations from graduation to after teaching for one year;
3. satisfaction with certain preparation factors like student teaching;
4. teaching level;
5. personnel factors, such as gender, GPA and market status;
6. how the respondent rated the adequacy of the preparation program at time of graduation.

Six empirical hypotheses were developed to test the model.

Hypothesis 1. There is a significant relationship between the level of satisfaction teachers express with their current position and their adequacy rating of the teacher preparation

program on year after graduation.

Hypothesis 2. There is a significant relationship between teachers who exhibit congruency in their job expectations from graduation to one year after graduation and their adequacy rating of the teacher preparation program one year after graduation.

Hypothesis 3. There is a significant relationship between certain preparation factors, such as satisfaction with student teaching, student teaching performance and overall rating of the teacher preparation program and adequacy rating of the teacher preparation program one year after graduation.

Hypothesis 4. There is a significant relationship between level of preparation (elementary or secondary) and adequacy rating of the teacher preparation program one year after graduation.

Hypothesis 5. There is a significant relationship between certain personal factors, such as gender, graduating grade point average and marital status, and adequacy rating of the teacher preparation program one year after

graduation.

Hypothesis 6. There is a significant relationship between the rating of adequacy of the teacher preparation program at the time of graduation and the rating of adequacy of the teacher preparation program one year after graduation.

The study utilized data collected from a comprehensive and on-going research project conducted by the Research Institute for Studies in Education at Iowa State University. The teacher education graduates who provided data for the study graduated either during the academic year 1986-1987 or 1987-1988. Because a purpose of the study was to gain a better understanding of teachers, only those graduates who were teaching were included in the study. Also, because of the need for comparison between how a respondent answered certain items at graduation and again one year later, only those who responded to both surveys were included. The sample consisted of 180 individuals out of the 735 teacher education graduates during those two years.

Empirical measures for each variable in the model were described in Chapter 3. The statistical procedures used included correlation and multiple regression. To better test the model, two methods of entering the variables in the

regression equation were used. With the "Forced entry" mode, variables in a block are entered one at a time in order of decreasing tolerance but are treated as a single block for statistics computed for changes in the equation. With the "stepwise" mode, a re-examination of the variables incorporated in the model takes place at every step. A variable that entered at an early stage may, at a later stage, become superfluous because of its relationship with other variables new in the model. To examine this possibility, at each step a partial F test for each variable presently in the model is made, treating it as though it were the most recent variable entered, irrespective of its actual entry point into the model. The variable with the smallest nonsignificant F statistic is removed, the model is refitted with the remaining variable. The whole process continues until no more variables can be entered or removed.

The results presented in the previous chapter indicate that the hypothesized model helps to explain factors that influence adequacy rating one year after graduation. Presented below are the findings, followed by a brief discussion of their implications for practice and further recommendations for research.

### Findings

1. The model was relatively effective in explaining factors which influence adequacy rating one year after graduation. The four variables: adequacy rating at time of graduation; overall rating of program; teaching level and position factors explain 47% of the variance in the adequacy rating one year after graduation. The path coefficient for adequacy rating at graduation is the largest coefficient (.370), followed by overall rating of program (.258), teaching level (-.175), and position factors (.171). This is consistent with the literature and previous research. The hypothesized variables of personal factors (which consisted of gender, GPA and marital status), student teaching performance and satisfaction with student teaching were found on the basis of this study, not to be factors which influenced adequacy rating one year after graduation. Also not supported by this study was the idea that congruency of job characteristics between graduation and one year after graduation would influence adequacy ratings one year after graduation.

2. Position factors was an important component of this model. It helped explain some of the variance in the adequacy rating one year after graduation, but was influenced by other variable in the model.

Three variables: congruency of job characterization; satisfaction with student teaching; and adequacy rating at graduation explain 51 percent of the variance in position factors. Congruency of job characteristics had the largest path coefficient (.633) and the strongest relationship in the model. This is consistent with theory and the literature. The personal factors of gender, GPA and marital status were not hypothesized to influence position factors and based on this study no evidence of a relationship exists.

Preparation factors were hypothesized to effect position factors, but only satisfaction with student teaching was supported by this research. Student teaching performance and overall rating of the program were not supported as influences of position factors in this study. Teaching level was not hypothesized nor any evidence of a relationship with position factors were found.

3. Nothing was hypothesized to effect congruency of job characteristics and this research found no evidence of relationship except a "weak" relationship with adequacy rating at graduation (.142). This accounted for only one percent of the variance.

4. Preparation factors were to play an integral part of this model. Overall rating of the program not only

accounted for some of the variance in adequacy rating one year after graduation (.258), but was also influenced by adequacy rating at graduation (.587) and teaching level (-.111). These two variables accounted for 37 percent of the variance in overall rating of the program. Personal factors were hypothesized to influence overall rating of program but were not supported by this research.

Student teaching performance did not influence any variables, but was hypothesized to be influenced by teaching level, marital status, adequacy rating at graduation, GPA and gender. This research only supports a relationship between student teaching performance and GPA (.142) and adequacy rating at graduation (.261) and these two variables only explain 8 percent of the variance.

Satisfaction with student teaching proved to be a factor in position factors, but was also influenced by teaching level (-.280), marital status (.226) and adequacy rating at graduation (.122). GPA and gender were hypothesized to effect satisfaction with student teaching, but was not supported by this research.

5. Adequacy rating at graduation was hypothesized to have a strong effect on adequacy rating one year after graduation and this was supported by this research (.270). It was also hypothesized to be influenced by personal

factors and teaching level. This research supported only a relationship with teaching level (-.156), which explained only 2 percent of the variance. Personal factors such as gender, GPA and marital status are not supported by this research as having a relationship with adequacy rating at graduation.

### Discussion

This section provides an opportunity to discuss major findings and their implication to this theoretical model.

As theory and previous research indicates, the strongest factors which influence ratings are prior ratings of the same subject. It was thought that Veenam's theory (1984) of "first year shock" would have an influence on adequacy rating one year after graduation, but was not supported by this research. The strongest path in the model was from adequacy rating at graduation to overall rating of the program to adequacy rating one year after graduation. Also, on the basis of this study, personal factors do not influence ratings of adequacy either at graduation or one year after graduation. Further examination may be necessary to help explain why no relationship exists.

Using Festinger's "cognitive consistency theory," the model hoped to determine if cognitive dissonance influenced



adequacy ratings. This research finds no support for any relationship with congruency of job characteristics and adequacy rating one year after graduation. However, the strongest relationship in the model was between congruency of job characteristics and position factors. This supports the cognitive dissonance research that states people with cognitive congruency are more satisfied with their jobs (Mahan and Lacefield, 1978). Additional research would be helpful to explain why cognitive dissonance does not effect adequacy rating. What may be necessary in additional research is a longer period of time between the two adequacy ratings for dissonance to have an effect.

As previous research also indicates, elementary teachers continue to effect various aspects of the teacher preparation program. Level of preparation influenced four variables in this model: adequacy rating at graduation; overall rating; satisfaction with student teaching and adequacy rating one year after graduation. A look at the four path coefficients indicates that the influence is a result of elementary teachers.

#### Implications

The importance of the student teaching experience and it's influence on position factors, which in turn influence

ratings of adequacy on year after graduation was demonstrated by the testing of this hypothetical model. The student teaching experience needs to be rich and rewarding. Faculty in the teacher preparation programs need to ensure that students understand the effect student teaching could have on their professional career. Also, faculty need to ensure a quality academic program is provided to all students enrolled in the teacher preparation program.

The model showed a strong relationship between congruency of job characteristics (between graduation and one year after graduation) and satisfaction with position factors. This strong relationship indicates a need to assist students in finding positions that will meet their job expectations. The additional focus on job placement should result in the possible reduction of dissonance with job expectations and higher satisfaction with position factors.

It was hypothesized that the difficulties associated with the first year teaching experience, Veenam's "reality shock" (Veenam, 1982), would have an effect on the rating of adequacy of the teacher preparation program one year after graduation. This hypothesis was not supported by the testing of the model. There could be various explanation for this, but it appears the first year teachers did not

associate problems of their first teaching experience with the adequacy of the teacher preparation program.

#### Recommendations

Since research is an ongoing activity, the testing of this hypothetical model resulted in additional areas identified for further study. The suggestions for research provided below are designed to strengthen the methodology identified with the testing of this model and provide answers to questions generated by this study.

1. Conducting additional research is necessary in an attempt to explain why this model did not find an influence of congruency of job expectations on adequacy ratings one year after graduation.

2. Continue testing of the model using the five (5) year follow-up data from RISE.

3. Continue study is necessary to explain which position factors have a greater or lesser influence on graduates rating of adequacy one year after graduation.

4. Consider adding to the model other important variables under position factors. Currently, environmental factors such as size of school or community, workload and extra curricular involvement, are not included in the model.

5. Developing and including of a measure of

self-concept needs to be incorporated into the model. This variable should be collected early in a students career and used to examine the effect of self concept on various measures used in the model.

Through the conceptualization and testing of this model, additional insight might be provided to explain adequacy ratings and factors which influence such ratings. However, it is the higher education administrator who must look at many criteria in the review of programs and make the difficult decisions regarding improvements or changes to such programs. If education is to meet public expectations, significant effort and research will be required by all involved. This is a contribution to that process.

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**APPENDIX A. TABLES**

Table A.1. Planning and delivering instruction composite:  
results of factor analysis using data collected  
from population of study

	Graduate Inter-item correlation	Alpha	One Year follow-up Inter-item correlation	Alpha
Planning and delivering instruction	.41	.89	.38	.88
Relating activities to interest/abilities				
Locating and using materials				
Evaluating own instruction				
Individualizing instruction				
Selecting and organizing materials				
Using a variety of instructional techniques				
Planning instruc- tional units and lessons				
Using community resources				
Techniques of curriculum construction				
Maintaining student interest				

Table A.1. Continued

	Graduate Inter-item correlation	Alpha	One Year follow-up Inter-item correlation	Alpha
Content area preparation				
Assessing and implementing innovation				

Table A.2. Mean and standard deviation of items in the planning and delivering instruction composite for graduates and one year follow-up

Planning and Delivering Instruction Composite						
	Graduate			One Year Follow-up		
	Mean	SD	N of cases	Mean	SD	N of cases
Relating activities	3.82	.85	180	3.63	.92	176
Locating and using materials	3.88	.94	178	3.66	.94	173
Evaluating own instruction	3.72	.89	179	3.72	.97	174
Individualizing instruction	3.71	.91	180	3.56	1.08	177
Selecting and organizing materials	3.76	.86	179	3.72	1.00	177
Using a variety of instructional techniques	4.13	.79	180	3.99	.93	177
Planning instructional units and lessons	3.82	1.06	179	3.89	.99	177
Using community resources	3.69	.93	180	3.43	1.02	175
Techniques of curriculum construction	3.33	1.05	179	3.33	1.10	174
Maintaining student interest	3.42	.94	178	3.35	.94	177
Content area preparation	4.07	1.04	178	4.08	.90	171

Table A.2. Continued

	Graduate			One Year Follow-up		
	Mean	SD	N of cases	Mean	SD	N of cases
Assessing and implementing innovations	3.30	.89	178	3.27	.90	171
Composite	3.72	.57	180	3.64	.64	178



Table A.3. Self-rating of teaching performance composite: results of factor analysis using data collected from population of study

Learning environment performance	Inter-item Correlation	Alpha
	.37	.81
Providing setting conducive to learning		
Motivating students		
Communicating effectively with students		
Exhibiting a positive concept		
Maintaining high expectations for student achievement		
Incorporating effective questioning techniques		
Maintaining high standards for student behavior		
Teaching Behavior Performance	.44	.83
Demonstrating knowledge of subject matter		
Monitoring/evaluating student progress and understanding		
Providing clear, concise explanation and examples		
Demonstrating effective planning and organization skills		
Implementing the lesson plans effectively		

**Table A.4. Mean and standard deviation of items in the self rating of teaching performance composite**

<b>Learning environment performance</b>	<b>Mean</b>	<b>SD</b>	<b>N of cases</b>
Providing setting conducive to learning	8.1	1.29	179
Motivating students	8.02	1.32	180
Communicating effectively with students	8.63	1.22	180
Exhibiting a positive concept	8.86	1.29	180
Maintaining high expectations for student achievement	8.57	1.16	180
Incorporating effective questioning techniques	8.11	1.28	180
Maintaining high standards for student behavior	8.58	1.29	180
<b>Composite</b>	<b>8.41</b>	<b>.93</b>	<b>180</b>

<b>Teacher Behavior Performance</b>			
Demonstrating knowledge of subject matter	8.62	1.17	180
Monitoring/evaluating student progress and understanding	8.01	1.26	180
Providing clear, concise explanations and examples	8.03	1.3	180

Table A.4. Continued

Learning environment performance	Mean	SD	N of cases
Demonstrating effective planning and organization skills	8.64	1.34	180
Implementing the lesson plans effectively	8.49	1.21	180
Composite	8.36	.92	180
Self Evaluation as a teacher	4.50	.58	273

Table A.5. Mean and standard deviation of the items in the job characteristics composite for graduate and one year follow-up

Job Characteristics	Graduate			One year follow-up		
	Mean	SD	N of cases	Mean	SD	N of cases
Opportunity to be creative	4.64	.54	180	4.13	.90	166
Opportunity to use abilities	4.56	.58	180	3.98	1.02	166
Work with people not things	4.68	.51	180	4.57	.65	166
Earn great deal of money	3.29	.86	180	2.45	1.00	166
Social status and prestige	3.27	.84	180	2.97	1.05	165
Effect social change	3.94	.77	178	3.38	1.01	165
Freedom from supervision	3.76	.82	180	3.76	.90	166
Opportunity for advancement	3.94	.87	179	2.79	1.16	165
Exercise leadership	4.23	.69	180	3.98	.94	165
Help and serve others	4.69	.54	180	4.60	.58	166
Adventure	3.85	.97	179	3.45	1.13	165
Stable and secure future	4.31	.72	180	3.32	1.23	164
Fringe benefits	4.12	.83	180	3.51	1.46	163
Variety of work	4.53	.61	180	4.07	.92	165
Responsibility	4.48	.57	180	4.68	.53	165

Table A.5. Continued

Job Characteristics	Graduate			One year follow-up		
	Mean	SD	N of cases	Mean	SD	N of cases
Control over what I do	4.46	.64	180	4.27	.78	165
Control over others	3.20	.80	180	3.25	1.12	165
Challenge	4.60	.21	180	4.58	.71	165
Composite	4.14	.36	180	3.76	.49	166

Table A.6. Position factors composite: results of factor analysis using data collected from population of study

	Inter-item Correlation	Alpha
Satisfaction with the environment	.32	.78
Salary		
General working conditions		
Job benefits		
Amount of administrative support		
Extent of involvement in decision-making		
Opportunities for advancement		
Job responsibilities		
Extent to which job challenges and provides for professional growth		
Importance of Position Factors		
External	.33	.59
Salary offered		
Type of position		
Size of organization		
Importance of Positions Factors		
Internal	.65	.78
Reputation of Organization		
Liked Interviewer		

Table A.7. Mean and standard deviation of items included in the position factors composite measured one year after graduation

	Mean	SD	N of cases
<b>Satisfaction with the environment</b>			
Salary	3.00	1.25	164
General working conditions	3.54	1.05	163
Job benefits	3.53	1.24	155
Amount of administrative support	3.44	1.32	164
Extent of involvement in decision-making	3.54	1.03	161
Opportunities for advancement	3.10	1.08	158
Job responsibilities	3.97	.82	165
Extent to which job challenges and provides professional growth	3.93	.99	165
<b>Importance of Position Factors - External</b>			
Salary offered	3.35	1.22	157
Type of position	4.08	.92	158
Size of organization	3.17	1.15	156
<b>Importance of Position Factors - Internal</b>			
Reputation of organization	3.53	1.12	155
Liked interviewer	3.83	1.02	156
General satisfaction with current job	6.95	2.18	156

APPENDIX B. SURVEY INSTRUMENTS AND COVER LETTERS

Teacher Education Program Graduate Survey	92
One-Year Follow-up Teacher Education Graduate Survey	106



Iowa State University *of Science and Technology* Ames, Iowa 50011



*Research Institute for Studies in Education  
College of Education  
The Quadrangle  
Telephone 515-294-7009*

April 7, 1986

Dear Teacher Education Graduate:

Congratulations on completing your program in teacher preparation at Iowa State University!

We hope that your teaching and learning experiences in the program have been rewarding and have provided the basis for continuing professional and personal development. We appreciate your participation in the program and the contributions you have made through course work and other activities to the total program.

We need your opinions and observations to assist in improving present programs and developing new programs. Your voluntary participation in evaluating the programs at Iowa State University in terms of quality, effectiveness and adequacy is requested. You may be assured of complete confidentiality. The questionnaire has an identification number for mailing purposes and data analysis. Your name will not be placed on the questionnaire. The information provided will be analyzed in terms of group summarizations.

Return postage on the questionnaire has been prepaid, so you need only to drop the completed questionnaire in a mailbox.

If you have questions about this study, please contact the Office of Research Institute for Studies in Education, or call 515-294-7009.

Thank you for your assistance in completing the questionnaire which provides us with your insights about program strengths and weaknesses.

We wish you success in all your future activities.

Sincerely,

*Virgil S. Lagomarcino*  
Virgil S. Lagomarcino  
Dean

*Richard D. Warren*

Richard D. Warren, Director  
Research Institute for Studies  
in Education

Enclosure

5. Using the rating scale below, indicate how satisfied you were with aspects of your student teaching experience.

- Very Satisfied . . . . 5
- Satisfied . . . . . 4
- Neutral . . . . . 3
- Dissatisfied . . . . . 2
- Very Dissatisfied . . . 1

Please circle your response

- a. Getting your choice of geographical location for your student teaching assignment. . . . . 5    4    3    2    1
- b. Your cooperating teacher. . . . . 5    4    3    2    1
- c. Your university supervisor. . . . . 5    4    3    2    1
- d. Based on your student teaching experience, what is your reaction to teaching as a career for you? . . . . . 5    4    3    2    1

6. At what age did you decide to become a teacher? \_\_\_\_\_ years old.

7. If you had it to do over again, would you prepare to become a teacher?

- Yes
- No
- Undecided

8. Do you feel you will be ...

- ... an excellent teacher?
- ... a better than average teacher?
- ... an average teacher?
- ... a below average teacher?
- ... an inadequate teacher?

15. What are your employment plans for the 1987/1988 school year?
- Have obtained a teaching position for 1987/88 school year.
  - Currently seeking or plan to seek a teaching position.
  - Currently seeking or plan to seek a non-teaching position.
  - Graduate study (Please specify area ---> \_\_\_\_\_).
  - Other (Please specify ---> \_\_\_\_\_).
16. What is your long-range career plan? (Please check the most appropriate response. Check only one.)
- Teaching ---> skip to Q. 18
  - Employment in education other than teaching ---> skip to Q. 18  
Please specify ---> \_\_\_\_\_
  - Employment outside the field of education ---> please answer Q. 17  
Please specify ---> \_\_\_\_\_
  - Other ---> please answer Q. 17  
Please specify ---> \_\_\_\_\_
17. (Non-teaching) Why do you plan not to enter the field of education? Check as many as apply.
- Lack of teaching positions available.
  - Greater career opportunities in nonacademic jobs.
  - Higher salaries and benefits in nonacademic jobs.
  - Marriage/family obligations.
  - Had not planned to enter education.
  - Experiences in student teaching.
  - General working conditions (nonteaching duties, hours, classroom size, work load).
  - Student related (motivation, lack of discipline, general attitudes).
  - General administrative framework in local schools.
  - Lack of respect.
  - Emotional aspects (stress, burnout, frustration, boredom).
  - Lack of support from parents and community.
  - Lack of advancement opportunities.
  - Other (Please specify ---> \_\_\_\_\_).

### A Note to Respondents

In recent years, the teaching profession has been marked by rapid change and the emergence of a number of issues and concerns. It is essential that teacher preparation programs be responsive to these concerns. Therefore, the ISU College of Education is developing a comprehensive model to evaluate and to improve the quality of the teacher preparation program. Your reactions to and responses about your preparation and subsequent employment experiences are a major ingredient of this model.

Various approaches are used by colleges of education to evaluate, improve, and modify programs for the preparation of educational personnel. Among these approaches in the evaluation process is a follow-up study of graduates from preparation programs. To provide the necessary information for program improvement, the data need to be collected on a regular basis and over a period of time. These longitudinal studies are beneficial in providing insights about program strengths and weaknesses and in assisting in program improvement and modification.

Since 1979, the Research Institute for Studies in Education (RISE) has been collecting data from teacher education graduates at major points in their preparation and careers. Now, one year after graduation, we are contacting you again for information about your current attitudes, competencies, personal characteristics, and employment. The information we receive is summarized and presented in a report that is discussed by faculty in the College of Education as they plan changes for improving and updating the teacher preparation program. As mentioned in the accompanying letter, no individual responses are ever reported.

These data, collected over the past seven years, have been very helpful in keeping the ISU Teacher Preparation Program current and responsive to changing educational needs. Your input is very much appreciated.