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Career plans of students enrolled in a beginning teacher education class at Iowa State University

Zinna Lavern Bland
Iowa State University

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EDUCATION CLASS AT IOWA STATE UNIVERSITY

Iowa State University

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Career plans of students enrolled in a
beginning teacher education class at
Iowa State University

by

Zinna Lavern Bland

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 (Curriculum and
Instructional Technology)

~~Approved:~~

Signature was redacted for privacy.

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For the Graduate College

Iowa State University
Ames, Iowa
1986

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Bad will be the day for every person when we become absolutely contented with the life we are living, with the thoughts that we are thinking, with the deeds that we are doing, when there is no forever beating at the doors of our soul some great desire to do something larger, which we know that we were meant and made to do because we are still, in spite of all, children of God.

--Phillips Brooks
(modified to eliminate sexist
language)

Love and appreciation are expressed for the many friends and family members near and far who provided moral and emotional support, encouragement, and understanding.

To the following persons I would like to say thanks: my sister Annie "Peep" and her husband Willie "James", thank you for the many gifts sent (long-johns, "M blanket", etc. for the cold weather); my sisters Lynda and Vivian thanks for the up-dates about happenings at home; my brothers Oliver and Larry and their wives Mattie and Theresa "Pen" thanks for financial and other assistance; my sister Jeanette thanks for visiting and the flowers to cheer me; my brother Percy and his wife Jackie and my brother Curtis, thanks for being there. "Pen", it's your turn. Mom, I am as proud of you as you are of me.

With the guidance and understanding provided by Dr. Lynn W. Glass, my major professor, this researcher has learned much. I am thankful for his patience, time, dedication, and faith. It was a delightful experience to work with Dr. Richard Warren, Dr. Penny Ralston, Dr. George Kizer, and Dr. Kenneth Elvik as members of my doctoral committee. These persons, as a group, provided guidance, kind and encouraging words, and valuable suggestions that contributed to my professional growth as a doctoral student and candidate. Special thanks go to Dr. Ralston and Dr. Glass for the personal touches that made me feel more at home.

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Last, but not least, it was loving memories of my father which often sustained me. I often felt his and the Almighty's presence.

DEDICATION

This work is dedicated to my father Mr. Percy Lewis Bland I, deceased--January 23, 1974, and my mother Mrs. Annie Morse Liddle Bland. Two people whom I will forever love.

CHAPTER I -- INTRODUCTION

In one form or another, teaching is a profession that has existed since the beginning of civilization. Society provides a great deal of money to assist in the financial support of the many students enrolling in and graduating from our educational institutions. In 1983, approximately 135,000 persons graduated from teacher education programs in institutions of higher education (Feistritz, 1984). Of the total sources of funding for public four-year institutions of higher education, 44.5% came from the states (The Condition of Education, 1981). Also, 47.4% of the total revenue and expenditure for elementary and secondary education in 1980 came from the states (Statistical Abstract of the U.S., 1983). The U.S. average per capita income spent on education for the 1980-81 term was 6.8%. The Iowa average per capita contribution was 7.7% (1984 Statistical Profile of Iowa, 1984).

With the number of persons entering into and graduating from teacher education programs, the amount of money expended each year by states for public education, and education serving as a means for people to progress, it is astounding that so little is known about the

persons who touch the lives of so many. This is emphasized by Feistritzer (1984) stating that "strangely, in a field supposedly dedicated to the spread of knowledge, little information is collected and maintained on teacher education students" (p. 55). Also, Schalock (1979) in a report on research on teacher selection stated, "In a profession where there is so much talk about "attracting better people" it is odd that so little has been done on the characteristics and circumstances of persons entering the profession, and the relationships among these conditions of entry and subsequent success" (pp. 366-367).

The educational institutions in America have come under attack from many sectors. Within the last several years, the "quality" of education received by America's youth and the "ability/quality" of the teachers providing this education have been questioned in reports stating that the "semi-literates are teaching the illiterates".

The National Commission on Excellence in Education (1983) stated in summation:

. . . that not enough of the academically able students are being attracted to teaching; that teacher preparation programs need substantial improvement; that the professional working life of teachers is on the whole unacceptable (p. 22).

The Commission specifically stated that:

Too many teachers are being drawn from the bottom quarter of graduating high school and college students (p. 22).

Half of the newly employed mathematics, science and English teachers are not qualified to teach these subjects; fewer than one-third of U.S. high schools offer physics taught by qualified teachers (p. 23).

While the previous statements provide insight into the problem(s) facing teacher education programs, a national study to investigate such statements is beyond the scope of this study. However, the implications of the data included should allow one to draw generalizations about Iowa State University and the quality of its teacher education graduates.

Students who are presently enrolled in undergraduate level teacher education programs bring to this level of education a multitude of experiences gleaned from their elementary-secondary schooling. These experiences serve as a basis for their development of teacher education knowledge, skills, and attitudes. In turn, these experiences are reintroduced into the elementary-secondary classrooms through a new generation of teachers--practices perpetuate practices. For a better portrayal of the above, imagine the following diagram as a cyclical pattern where students progress

from elementary school to secondary school to college. Upon completion of a degree from college, a student receives certification and returns to elementary or secondary school to "perpetuate" what has been learned.

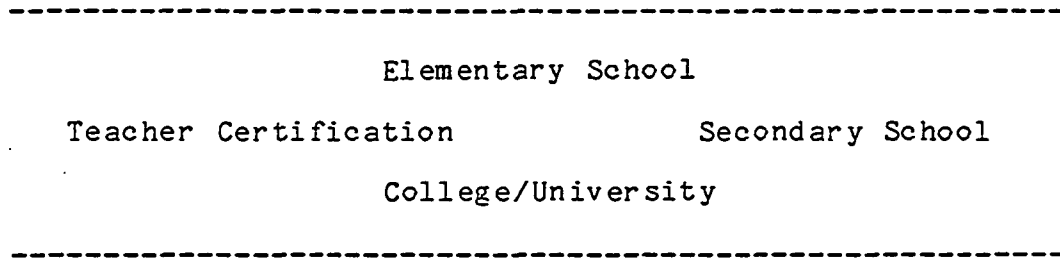


FIGURE 1: Cyclical Pattern of Students Progressing From Elementary School to Teaching Positions

Problems within the educational institutions did not occur overnight. In 1975 Shields, in an article entitled "Why Johnnie Can't Write", alluded to the circular/cyclical pattern of our educational institutions as well as to their weakening conditions.

If your children are attending college, the chances are that when they graduate, they will be unable to write ordinary, expository English with any real degree of structure and lucidity. If they are in high school and planning to attend college, the chances are less than even that they will be able to write English at the minimal college level when they get there. If they are not planning to attend college, their skills in writing English may not even qualify them for clerical or secretarial work. And if they are attending elementary school, they are almost certainly not being given the kind of required reading material, much less the writing instructions, that might make it possible for them eventually to write

comprehensible English. Willy-nilly, the U.S. educational system is spawning a generation of semi-literates (p. 57).

Teacher education programs must collect, evaluate, and interpret data on students entering into and graduating from their programs to determine the academic and other characteristics of the students.

Statement of Problem

This study is designed to investigate the characteristics of the students who were enrolled in a beginning teacher education course and entered, progressed, persisted, and achieved a degree in teacher education at Iowa State University as compared to those students who officially or unofficially withdrew from school or graduated in another program of study.

Characteristics chosen for the study include:

1. long-range career plans,
2. importance of job characteristic items,
3. gender,
4. ACT scores,
5. high school rank,
6. participation in activities,
7. leadership in activities, and
8. transfer status of students.

Data were collected about and from students who enrolled in El Ed/Sec Ed 204, The School and American Life, during the 1980-81 school term.

Purpose of Study

The purpose of this study is to provide answers to the following questions about a selected group of students at Iowa State University:

- 1) What are the characteristics of the students who enrolled in El Ed/Sec Ed 204 during the 1980-81 school term relative to:
 - a. gender,
 - b. ACT scores,
 - c. high school rank,
 - d. transfer status,
 - e. long-range career plans,
 - f. perception of importance of various job characteristic items,
 - g. participation in activities, and
 - h. leadership in activities?
- 2) What are the differences in characteristics among students who enrolled in El Ed/Sec Ed 204

during the 1980-81 school term when grouped by status in school:

- a. graduated in teacher education,
- b. graduated in another program, or
- c. dropped out of school.

Justification of Study

During the 20th century, very little research concerning teacher characteristics has been conducted. The majority of this research occurred during the time span from 1950-1970. The focus and methodology used was considered to be relatively weak and drew from psychology and anthropology. However, the publication of A Nation at Risk on April 26, 1983, along with a host of subsequent reports, has rekindled an interest in investigating characteristics of those persons attracted to the teaching profession. These studies are being conducted as a means to establish guidelines/criteria for future recruitment, selection, and admission of students to teacher education programs; to substantiate or refute claims by various educational reform reports; to develop a profile for students who are considering teaching as a career to let them know the type(s) of person their future colleagues will be; to predict success in the

classroom by educators or to determine behaviors most effective in both promoting student achievement and maintaining classroom control by school administrators; and to determine differences in persons in education from those in other professions (Ryan & Phillips, 1982; Schalock, 1979; and Feistritz, 1984).

With the many reports published during the current reform movement in education, parents as well as educators are questioning the quality of persons graduating from teacher education programs. Teacher effectiveness has been considered as a means to determine the quality of teachers. "Preexisting teacher characteristics" is one of eight variables used by Medley (1982) in a design/model for teacher effectiveness. He defines preexisting teacher characteristics as knowledge, abilities, and beliefs that a teacher is expected to possess on entering into professional training. Medley believes that, "for the most part, these traits are stable personality traits (like general intelligence or interest in children) that are believed to be relevant to successful teacher performance but that a teacher education program cannot and should not try to develop in students who do not already possess them" (p. 1895). Ryan and Phillips (1982) state, "As a society we need to

know the qualities and characteristics of the people to whom we entrust the development of our most valuable natural resource, our children" (p. 1869).

Delimitations of Study

The data to be analyzed were gathered as a part of the longitudinal study of the teacher education program by the Research Institute for Studies in Education at Iowa State University. It is not to be assumed that students in the teacher education program at Iowa State University are representative of individuals in other universities nor other programs of study or students at Iowa State University. The study will also be limited to those students who provided usable questionnaires.

Assumptions

The following are assumptions of this study.

1. The items of the questionnaire(s) used in this study are valid and reliable.
2. Students who answered the questionnaire(s) were honest and accurate in their responses.
3. The data used in the study from students' records are accurate.

Statement of Hypotheses

Students in this study are separated into three groupings by status in school. They are:

1. students who graduated in teacher education,
2. students who graduated in another program of study, and
3. students who withdrew from school. Hereafter, these three groups will be referred to as "those persons who took, those persons who were enrolled in, etc." unless otherwise stated in an hypothesis.

HYPOTHESIS I -- There are no significant differences in sex, transfer status, ACT scores, and high school rank among those persons who took El Ed/Sec Ed 204 during the 1980-81 school term.

HYPOTHESIS II -- Students' stated long-range career plans at the time they were enrolled in El Ed/Sec Ed 204 during the 1980-81 school term is independent of status in school (progression or completion in a program of study).

HYPOTHESIS III -- There are no significant differences in students' perception of importance of various job characteristics among those students at the time they were enrolled in El

Ed/Sec Ed 204 during the 1980-81 school term and progression or completion in a program of study.

HYPOTHESIS IV -- There are no significant differences in participation in activities among those students who enrolled in El Ed/Sec Ed 204 during the 1980-81 school term.

HYPOTHESIS V -- There are no significant differences in leadership in activities among those students who enrolled in El Ed/Sec Ed 204 during the 1980-81 school term.

HYPOTHESIS VI -- There are no significant differences in ACT scores, high school rank, long-range career plans, participation in activities, leadership in activities, and perception of various job characteristics between transfer and native students who graduated in teacher education at Iowa State University.

Definition of Terms

ACT scores -- American College Test scores

Activities -- A pursuit in which a person is active; a form of organized supervised, often extra-curricular recreation (Webster, 1981); i.e., cheerleading, sports, church youth groups, etc.

- El Ed/Sec Ed 204 -- Elementary Education or Secondary Education 204 (The School in American Life). The course is described as one providing the goals of schooling, including the roles of teachers today; historical development of schools; educational reforms and alternative forms; and current philosophical issues. Human relations aspects of teaching and discussions about teaching as a career. (This is a sophomore level course.)
- High school rank -- The rank a student held in his/her high school graduating class in regard to academic achievement as compared to fellow students in the same class
- Long-range career plans -- A plan a person has relative to achievement in public, professional, or business life (occupational choice)
- Leadership -- Supervisory capacity held or a position held of authority to guide others
- Native Student/Non-Transfer Student -- A student who matriculated to a senior college directly from high school (Cramer, 1971)
- Transfer student -- A student who started his/her education at another postsecondary educational institution and later enrolled in a senior college

Organization of Study

This study is divided into five chapters, references, and an appendix. Chapter I includes the background of the study (the introduction to the study), statement of the problem, purpose of the study, justification of the study, delimitations of the study, assumptions, statement of hypotheses, definition of terms, and organization of the study. The second chapter presents a review of the literature which will include a summary of publications and research studies on factors influencing career choices of students, factors influencing students to become teachers, the characteristics of students in teacher education, and students who transfer from two-year institutions to four-year institutions. Chapter III contains the methodology for the study which will include an explanation about the population, a description of the instrument(s), and techniques and procedures used to collect and analyze the data. The fourth chapter provides the analysis and interpretation of data and a discussion. The final chapter includes the summary and recommendation(s) of the study.

CHAPTER II -- REVIEW OF LITERATURE

Teachers are "entrusted with the development of our most natural resource, our children". Teachers, in essence, are the foundation of the educational development of children. This is probably one of the reasons why the first step in Medley's (1982) teacher effectiveness model is to determine the characteristics of those persons aspiring to become teachers. Some of the questions that we should ask are:

1. Who are our teachers?
2. What are their aspirations?
3. Why did they choose teaching as a career?
4. What traits and values do they possess?
5. What are our teachers academic abilities?

Very little information is available to answer questions as the above. This study was undertaken to begin to answer such questions in terms of the Iowa State University teacher education program.

This chapter of the study examines literature on factors relevant to choosing a career, factors influencing persons entering the teaching profession, characteristics of students in teacher education programs, and students who transfer to four-year institutions.

Factors Relevant to Choosing a Career

Do persons work to have a career or do they have a career to work? This dichotomy, work and career, have often been thought of synonymously, and depending on how each term is defined, they may possess common characteristics. When a person is asked "What is your career?" or "What type of work do you perform?", the answers are usually the same--"I'm a doctor." "I'm a lawyer." "I'm a teacher." etc.

It is hoped that when a person chooses a career, a choice is made whereby satisfaction is derived from the work performed. However, work has been viewed by some as an enjoyable activity and by others as drudgery. Regardless of the view held about work, changes have occurred due to technological advancements and the demands of society. Included in, but not limited to, these changes are shorter work days, better wages, improved working conditions, and equal opportunities for all.

Work serves various functions in our society which often influences the career choices made by persons. Six functions of work posited by Slocum (1974) are:

1. source of subsistence,
2. regulator of activities,

3. pattern of association,
4. identity,
5. meaningful life experiences, and
6. social status.

Vroom (1964), on the other hand, postulates two positions that determine whether people will work. They are economical and motivational. The economical position he says refers to an opportunity to work created by a demand on the part of society for goods and/or services and a demand on the part of employers for people to produce these goods and/or services; whereas, the motivational position refers to people preference for working as opposed to not working. Vroom feels that while both positions are important in a persons choice to work, the motivational factor probably has the greatest impact. Properties of the motivational factor show commonalities to Slocum's functions of work. These properties are:

1. wages,
2. expenditure of mental or physical energy,
3. production of goods or services,
4. social interaction with other persons, and
5. social status.

While the functions of work in our society and the properties of the motivational factor often impact on job choices, other factors have been attributed with having a more direct influence. These are:

1. physical characteristics,
2. mental abilities,
3. personal adjustments relative to the ability to get along with others, guiding motivations and goals, and emotional maturity, and
4. past achievements and failures in the areas of school work, part time and full time jobs, home, community and church, social clubs and groups, athletics, and hobbies (Humphreys, 1949).

Satisfaction is one of the major fulfillments to determine career choice. In examining at the previous paragraphs on the functions of work, the factors that determine if a person will work or not, and the other factors that influence career choices that are made, one underlying assumption is that the career choice made will provide satisfaction. Maslow and Herzberg are two theorists who have investigated job satisfaction of workers.

Herzberg's theory of motivation and hygiene tries to answer the question "What do people want from their

jobs?" (Herzberg, Mausner, & Snyderman, 1964). Hygiene factors, sometimes referred to as maintenance factors, include supervision, interpersonal relations, physical working conditions, salary, company policies and administrative practices, benefits, and job security. According to Herzberg, people are not motivated to strive for these factors, but they become dissatisfied when these things are absent. However, the presence of these things does not necessarily bring about positive attitudes. The motivation factor is conceptualized as actuating--needs of the individual to reach his/her aspiration. A person is motivated by such things as recognition, advancement, increased responsibility, potential for personal growth, achievement, and enjoyment of work.

Maslow's theory, rather than an attempt to understand people at work, is concerned with motivation in life (Warr & Wall, 1975). Maslow's theory is often referred to as a hierarchy of needs comprising five levels. The levels from bottom to top are physiological need, safety need, social need, need for esteem, and self-actualization. The physiological need refers to the desire for food, water, and things needed to exist. Safety is a need for security, the avoidance of physical

danger. Social need is a desire for affection and friendship. Esteem is a need for self-respect, to be able to evaluate oneself highly. Self-actualization is referred to as a person moving toward or reaching his/her full potential (Warr & Wall, 1975; Einhorn, Bradley, & Baird, 1982). The higher needs are extremely important, but not until the lower order needs have been satisfied. "Man does not live by bread alone, but when he has no bread his active wants are exclusively to do with food" (Warr & Wall, 1975).

Summary

The occupational status held by a person in society today is shaped by many environmental, intellectual, and social factors. The chosen occupation has a direct impact on income, possessions, place of residence, associates, leisure pursuits, amount of expenditures, and, in general, the kind of privileges and disadvantages which make up daily experiences. Persons choose occupations because of the satisfaction they feel will be derived from the experience, the contribution they feel their choice will make, and a means to realize self-actualization.

Factors Influencing Persons to Become Teachers

Many circumstances cause chain reactions which may branch into other chain reactions. The economic, political, and social systems are examples. They have a bearing on many events/deeds that occur in our society. One event in particular that is affected by these systems is the career decision made by a person. Once making a career decision, training must then be received. Hence, an educational choice is made. This choice is usually reflected by a person's possession or lack of possession of certain interests, abilities, and knowledge. Institutions providing the training use a set of standards for making selections from available candidates for educational programs. Among the entities reflected in these standards are the political, social, and economic systems; the availability of candidates; and the attributes possessed by the candidates. This is summarized in statements by Levine (1971) and Weaver (1979, 1981).

Levine (1971) states:

The interlocking character of social process and individual behavior is such that the specific career choices that individuals make is determined by a host of economic and social forces operative at that point in time when the career decisions are made. The opportunities that exist for creative, intelligent, talented

and poor young people are different in time of affluence, depression, war and peace. The behavior of the gatekeepers who determine admission policies at college, university, and occupational points is also a significant factor which influences the psychological and social characteristics of those who are permitted entry into given occupations and those who are closed out (pp. 2-3).

Weaver (1981) states "academic institutions respond to market conditions" (p. 4). "As market demand for new graduates in any given field declines, not only will the quantity of potential students decline but also the quality of the applicant pool prepared to enter the field of study" (1979, p. 32). He further states "there are relationships between the response of academic institutions . . . and the scholastic aptitude of our students" (1981, p. 4). When there are few applicants available, "intensified efforts to recruit and retain students and at the same time relaxed standards to capture those who did reply" become the primary focus of academic institutions (1981, p. 17).

Studies reveal that people tend to choose their careers relatively early in life and are influenced by persons with whom they have contact during this time. The school teacher is one such person who has many influences on students in elementary and secondary schools. Many persons who are teachers indicate their

desire and decision to become teachers resulted because of contact with their elementary and/or secondary school teacher(s).

Mori (1966) found that women tend to decide in elementary school and early secondary school to become school teachers; whereas men tend to decide in later secondary school or college to become teachers. Former teachers were found to be the most influential factor (Fielstra, 1955; Richards, 1960) or one of the most influential factors (Fox, 1961) in the career choices of students to teach. While job security has also been found to be an influential factor in choosing teaching as a profession, Roberson, Keith, and Page (1983) found that job security has not been reported as the chief motivational factor in teacher career choices nearly as often as teacher influence.

As indicated earlier, the systems operating in our society influence choices made by persons relative to career decisions. The functions of work and the properties of the motivational factor of whether people will work are evidenced in persons in the teaching profession. Mori (1966) found persons entering the

teaching profession to report the following about the teaching field:

1. The teaching profession provides a relatively good salary.
2. There is an attractive environment in schools.
3. Teachers can enjoy fellowship with interesting co-workers.
4. The teaching profession offers the satisfaction of being self-directive.
5. Teachers can get satisfaction from the development and improvement of their students.
6. Teaching is one of the highest kinds of human endeavor.

The vertical and horizontal hierarchy of the persons in a profession with the same generic title tend to have different factors influencing their career choice.

Teacher is an example of a generic title used for both elementary and secondary teachers. Top ranking factors of prospective elementary and secondary teachers relative to why they chose teaching reveal stark differences. Fox (1961) found that prospective elementary school teachers chose teaching because of a desire to work with children or adolescents, a desire to be of service to society, experience of working with youngsters, and the desire of an opportunity to leave the teaching profession and return to it later. Mangieri and Kemper (1984) and

Allison (1982) found some similar results of students who had a strong interest in becoming teachers. Prospective secondary school teachers ranked the following as most influential factors: liking for a particular subject; the comparatively short school day, long summer vacation and many other vacations; the trend towards increasing salaries in teaching; and the opportunity to use teaching as a stepping stone to another career. While both Mori (1966) and Fox (1961) found persons in teacher education indicating a good salary as a "benefit" of teaching, recent articles reflect a good salary is not an opinion held about teaching today (Phi Delta Kappan Gallup Poll, 1981, 1984).

A person's gender and exposure to environmental factors are influential in career choices that are made. Fox's study found the female respondents to report that they were influenced significantly more than male respondents by their desire to work with children or adolescents and the opportunity to leave the teaching profession and return to it later. Male respondents reported that they were influenced significantly more than the female respondents by their liking for a particular subject, the trend toward increasing salaries of teachers, and the opportunity to use teaching as a

stepping-stone to another career for choosing the teaching profession. Kingdom and Sedlacek (1981) found that women choosing traditional careers such as education seemed to engage in sex-role stereotyping. The most important factor for choosing their careers was working with people. Women choosing non-traditional career choices were encouraged to explore their non-traditional interests and had exposure to non-traditional role models. These women engaged in less sex-role stereotyping.

Activities that a person participates in or assumes leadership roles in also contributes to his/her occupational choice. Participation and/or leadership in extra-curricular and/or community activities are often viewed as a measure of one's probable involvement in the total school operation and community (Chen, 1982). Chen (1982) reported that studies by Baer and Brown and Endicott found election to an office to be considered an indicator of leadership and ability to work with people; while participation in certain extra-curricular activities provides evidence of experience of working with people in informal settings. In 1944, Martin used students' participation in extra-curricular activities in college and the number of offices held in college

organizations as effective predictors of their success in teacher education programs. Participation in and/or leadership in school- and non-school related activities during childhood and adolescence has also proven to be factors that impact on career choice (Ryans, 1960; Chen, 1982; Slocum, 1974).

Summary

There are many factors which influence a person to become a teacher. Some persons are influenced at a very early age and the association and contact with teachers in the schools being the primary reasons for their decisions to become teachers. The activities in which a person participates or assumes leadership roles contribute significantly to the career choices made. Political, social and economic systems can affect the types of students attracted to the teaching profession and the student admission criteria used by institutions. Furthermore, factors influencing persons to become teachers are different in regard to the gender and the teaching level, secondary or elementary education.

Characteristics of Students in Teacher Education Programs

Students in any educational program, as emphasized by Levine (1971) and Weaver (1979, 1981), are admitted based on criteria established by institutions and the characteristics students may possess or fail to possess due to the political, social, and economic systems that are operative.

The characteristics of teachers in our society have changed over time with each decade of teachers exhibiting factors from the operative systems, the region of the country, and the type of school. The teacher during the colonial period and through the first half of the nineteenth century was predominantly male. From the latter part of the nineteenth century until 1920, the proportion of males declined steadily to 14%. Since then, the percentage has risen, with setbacks during war periods, to 26-30 per cent (Charters, 1963; Feistritz, 1984).

During the 1920s to 1950s, teachers basically were female (three-quarters), single, conservative, and white. The teacher was likely to possess a warm and outgoing personality and was respected for devotion to students and mastery of subject matter. The teachers often began

teaching in their hometown at an early age, and typically were expected to stay in teaching as they married, raised a family, and actively participated in church and school affairs (Charters, 1963; Ryan & Phillips, 1982).

There has been a decrease in the quantity and quality of females opting for a teaching career. This is supported by Feistritz (1984):

Women, who historically have constituted 70 percent of the teaching force, are choosing to do other things than become classroom teachers. Bright young women 15 to 20 years ago chose teaching because they perceived it as the highest profession they could enter and/or because it gave them an opportunity to provide a second income for the family and be home when their children were not in school.

More women than men are now going to college, and the best and brightest of them are getting degrees in fields other than teaching

Women in record numbers are choosing professions that offer academic challenge, money and prestige (pp. 7-8).

Savage (1982) posits an alternative conclusion to the exodus of women from the teaching profession. He states "the sex equity movement is having an impact on women entering college. Large numbers of women with high academic qualifications are choosing majors in male-dominated fields" (p. 8). While recent statistics on enrollment in education reveal a decrease in the number of women in teacher education programs (Grant &

Synder, 1983-84), women still dominated the teaching profession. Of 992,000 persons (407,000 men and 504,000 women) employed with bachelor's and master's degrees that were awarded between June, 1979, and June, 1980, 22 per cent were in education. Of those choosing education, there is a disproportionate larger number of females by a factor greater than two females per each male.

Not only is there a decrease in the number of women entering teacher education programs, but there is also a decrease in overall enrollment. Education is still one of the largest majors for students in higher education institutions. In 1966, 18.6% or 1,118,000 of the students in higher education were enrolled as education majors. In 1972, 12.17% or 1,007,000 and in 1978, 781,000 (7.9%) were enrolled as education majors. Feistritz (1984) found that approximately 80 percent of those person who received certificates to teach actually went on to teach. She further states that approximately 80 percent of the students who started in education finished the teacher education degree program.

Students entering the teaching profession have different backgrounds. The parental background of persons who became teachers show characteristics of the era prominent at particular times. During the

agricultural era, teachers' parental backgrounds were basically agrarian. During the industrial era, parents were from primarily blue-collar background. Beginning with the late 1950s changes occurred to show an increase in the educational and the social economic status of parents.

The educational attainment of students who become teachers has changed also. In 1931, only one-third of the public school teachers had four years of college education. By 1957, three-fourths of all teachers held at least a bachelor's degree. The increase is represented by the following statistics of persons teaching with a bachelor's degree.

$\frac{1961}{85.4\%}$	$\frac{1966}{93.0\%}$	$\frac{1971}{97.1\%}$	$\frac{1976}{99.1\%}$	$\frac{1981}{99.6\%}$
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While most persons who are teachers may hold bachelor's degrees, it is questionable as to what academic abilities are represented by this degree. For example, teacher education students represent a disproportionate number of students from the lower half of their high school class, their average ACT score for admission to undergraduate teacher education programs is 1.1 points below the national average, and their average GPA for admission to undergraduate teacher programs is

2.29. Roberson, Keith, and Page (1983) found intellectual ability to have a negative correlation with aspirations of persons to teach. They further found that teachers today are somewhat less able intellectually than their classmates. The subjects for their study were drawn from a longitudinal study conducted during 1980 on high school seniors and sophomores in the United States.

Vance and Schlechty (1982) found "that teaching is more attractive to those individuals with low measured academic ability than to those persons with high measured academic ability" (p. 23). On a five-rank scale from lowest to highest of SAT scores, they found education attracts more than a proportionate share of students from the lowest two ranks (29.83% in education as compared to 15.05% not majoring in education). In addition, education attracts less than a proportionate share from the top two ranks (10.21% in education as compared to 21.92% not majoring in education). Persons actually engaging in teaching also represent a disproportionately large share of the lowest rank (15.81%) and a disproportionately small share of the highest rank (2.19%). In essence, persons majoring in education from the lowest rank tend to stay in teaching and persons from the highest rank tend to leave teaching. The Making of a

Teacher report reveals the average grade point for persons entering teacher education to be 2.29 on a 4 point scale and that the average ACT score for admittance to teacher education is 17.4 (Feistritz, 1984). The American College Testing Program reported an average ACT score of 17.2, 17.8, and 17.7 for 1980-81, 1983-84 and 1985-86 respectively of students planning to major in educational fields. The national average for all college-bound students during these same years were 18.5, 18.5 and 18.6 respectively. The state of Iowa college-bound students' average ACT scores were 20.3, 20.2, and 20.3 for the above listed years, in respective order; the high school grade point averages were 2.9, 3.0, and 2.9 (The High School Profile Report, 1980, 1983, 1985; College Student Profiles, 1980, 1983, 1985).

Summary

Teaching in the beginning was a profession for men, but today it is dominated by women. There has been a steady decrease in the enrollment of both men and women in teacher education programs as well as a decrease in the number of men and women who are becoming teachers. However, education programs still have a large share of the student enrollment. Students admitted to and completing teacher education programs are usually

students with the lowest academic ratings. Most students who enter the teaching profession today hold a bachelor's degree, and the students' parents are better educated than the traditional blue-collar workers.

Transfer Students

Students normally transfer from two-year institutions and from four-year institutions to other four-year institutions. Most of the transfers that occur, however, are from two-year to four-year institutions. Because of this, the focus of this section will be on the students from two-year institutions.

Two-year institutions have been associated with various names: the junior college, the community college, and the comprehensive college. Each name associated with two-year institutions represent an era in the history and development of the American two-year college. The concept of junior college was suggested in 1885 by Edmund J. James, a leader in business education and former president of University of Illinois (Nanassy, Malsbary, & Tonne, 1977). He believed that most of the work in the first two years of postsecondary education conducted by the traditional college was in the nature of the secondary school. The first two-year colleges

followed this concept and became known as an extension of secondary education. However, William Rainey Harper, the first president of the University of Chicago, thought the role of the junior college as providing the first two years of a baccalaureate program (Nanassy et al. 1977). In essence, the first two-year colleges became known as an extension of high school because students could attend upon completion of the 12th grade, and as a junior college because it provided the first two years toward a baccalaureate degree. Courses taken during these two years were considered as transfer credits (transfer education).

After World War II, a national committee of 30 civic leaders and educators conducted a survey of higher education in the U.S. and found financial assistance was needed by persons wishing to go to school for the 10th-14th years, a need for expansion of the adult education programs, and a need for more two-year collegiate institutions. This committee of 30 was known as the President's Commission on Higher Education. As a result of the Commission's report in 1947, hundreds of two-year postsecondary institutions sprung up across the country (Hillway, 1958). The name "community college" was recommended by the Commission because these

institutions were, as stated in the Commission's report, "to serve chiefly local community education needs.... It's dominant feature is its intimate relation to the life of the community it serves" (Hillway, 1958).

Enrollment trends

Vocational education/occupational education is commonly associated with the community college era in the history of two-year colleges. By broadening its functions and expanding the realms of the kinds of student clientele to be served, the community college era is gradually becoming what is termed a "comprehensive community college" era (Knoell, 1982). The normal enrollment of two-year college students who were high school graduates began to change. Veterans from the Vietnam War, senior citizens, women entering and reentering the labor force, persons seeking retraining, persons wanting to learn crafts and skills, persons wanting to go to school part time, etc. enrolled in the community colleges. The "typical" student in the two-year colleges was no longer a student seeking transfer credits or wishing to go to school full-time.

Comprehensive community colleges have many functions because of their diverse student clientele. However, this institution still has as one of its functions, a

foundation upon which it was built, transfer education. While there has been a decline in the transfer function of the two-year colleges, the enrollment has increased steadily from the total enrollment in 1962 of 818,869 to an enrollment in 1981 of 4,887,675 (Community, Junior, and Technical College Directory, 1982). The only year showing a decrease from previous year enrollment was in 1978 (.14 decrease from 1977 enrollment figures). The total enrollment of students in all undergraduate educational institutions for 1978 was 11,260,092 with 3,873,690 as representative of the two-year institutions.

The Occupational Outlook Handbook (1983) is predicting a decline in the number of people between the ages of 14 and 24. As a result of the decrease in the number of people in this age group, it is estimated that there will be a decrease in the number of first-time entrants in college in the decade to come. Hyde (1980) reported the main reasons given for students attending two-year institutions were proximity to home and low costs. With increases in the costs to attend college in general and four-year institutions in specific and cuts in various financial assistance, it is anticipated that a larger proportion of freshmen will attend two-year colleges as opposed to four-year colleges. This will

probably mean fewer first-time entrants at four-year colleges. Hence, a need for greater and better matching of transfer students and four-year collegiate institutions exists. Fredrick Kintzer, editor of New Directions for Community Colleges, in an editorial emphasized research by Knoell and Medsker stating the importance of improving the inadequacies of information exchange, orientation, counseling, advising, and other articulation services for transfers.

Academic standing of transfers

There are conflicting reports of the success of transfer students in four-year institutions. Some studies indicate that transfer students have a high failure rate (Kissler, 1980; Kissler, Lara, & Cardinal, 1981) and tend to take longer to complete a program of study upon transferring (Klitzke, 1961). Other studies reveal that transfer students do just as well as native students when matched for variables such as ACT scores, high school rank, or grade point average (Richardson & Doucette, 1980; Atherton, 1981; Mortorana & Williams, 1954; Klitzke, 1961).

Kissler et al. (1981) studied the persistence between native students at the University of California and transfer students from a California community college

or one of the California state universities or colleges. They found native students academic performance exceeded that of both groups, California community college and a California state university or college. It was further revealed that transfer students were more likely to be on probation, had higher attrition rates, had lower grades in upper division, and were less likely to graduate.

Martorana and Williams (1954) matched one-year transfers, two-year transfers, and native students on gender, major subject area of study, veteran status, size of high school attended, and year in college to determine the success of transfer students. When the transfer students were compared as a group with beginning freshmen at State College of Washington, there was no difference in academic success. In the subject areas of engineering and physical sciences, transfer students as a group "outdid" (academically outperformed) their non-transfer counterparts. Students who dropped out of school in the transfer group dropped out for reasons other than academic failure; whereas, academic failure was the main reason for the drop out of non-transfer students.

Richardson and Doucette (1980) studied the persistence, performance, progress and degree achievement of students who transferred with one academic year or two

academic years from one of Arizona's community colleges to one of its four-year state institutions. Transfer students with one or two years of academic work at a community college tended to have a decline in grade point average during the first semester at a four-year state institution. By the end of the second semester or by the time of graduation, transfer students' had grade point averages that equalled or surpassed that of native students.

Summary

The two-year institutions have evolved over time to serve many functions for the communities in which they are located. These institutions can provide the first two years of education for those persons not wanting to go directly to a four-year institution from high school. Persons attending two-year institutions sometimes do as well as their native counterparts after transferring to a four-year institution, and at other times not as well. The findings are from different geographical areas. This may suggest that some two-year institutions serve the purpose of "transfer education" better than others.

Chapter Summary

This section presented studies on factors that impact on a persons' career choice, factors influencing persons to enter teaching, characteristics of persons in teacher education programs, and the transfer functions of two-year institutions.

People choose careers based on the presence or absence of many factors. Some of these include the satisfaction they think will be derived from a job, the chance to earn money to support them in a desired life style, a means to express their individuality and make a contribution, abilities and interests, and the ability to pursue leisure activities as desired. Contact with the environment and contact with people tend to also influence career choices. The contact with elementary and secondary teachers is an important factor in the decision of a person to become a teacher. This suggests that career plans start at a very early age and are more than likely strengthen as time passes -- long-range career plans are, therefore, formed. Especially if persons later become teachers. Persons tend to choose teaching as a career because teaching offers a chance to work with children, provides one of the highest kinds of human endeavors, allows one to enjoy fellowship with

co-workers, and a chance to derive enjoyment from seeing children develop and improve.

Persons participate in many activities as they grow up. These activities can be grouped as community, school, academic, or leisure. Leadership roles are assumed in many of the same activities in which a person participates. The participation and/or leadership in these activities contribute to the career choice a person makes.

There are characteristics that are normally shared by persons in a particular profession. Persons in desiring to become teachers have to meet certain criteria established by admitting institutions. The mean ACT score for students wanting to become teachers is approximately 17.4 and the average grade point requirement for persons entering teacher education programs is 2.29.

While teaching at one time was a profession dominated by men, the dominant gender today is female. Most teachers today have completed four years of college and have been certified to teach in a particular grade and/or a particular subject. Many persons start their collegiate career at two-year institutions. These two-year institutions serve many purposes in the

community and also serve as the beginning for many students four-year collegiate career. There are contradictory findings on the success of transfer students as they progress, persist, and achieve degrees at four-year institutions. This would suggest that maybe some programs have a better congruency between the two- and four-year institutions.

CHAPTER III -- METHODOLOGY

This study is based on longitudinal data collected by the Research Institute for Studies in Education (RISE), College of Education at Iowa State University. Data were collected by RISE at various points of contact with students in the teacher education program. RISE personnel closely followed the procedures outlined by Dillman (1978, pp. 133-165), in his book, Mail and Telephone Surveys, The Total Design Model for data collection methods in this study. The Iowa State University Committee on the Rights of Human Subjects in Research acts as a reviewing agency to assure that the human subjects rights and welfare are adequately protected, that confidentiality of data are assured and that modified informed consent or informed consent is obtained by appropriate procedures when applicable.

The Population

To discuss the population, one needs to know something about the teacher education program and the criteria used to determine if students are admitted to the program. This section discusses the teacher education program, the admission criteria used by the

teacher education program, and the students used in this study.

Teacher education program

The teacher education program at Iowa State University is accredited by the National Council for Accreditation of Teacher Education (NCATE). There are five (5) colleges in the Iowa State University teacher education program (College of Agriculture, College of Education, College of Home Economics, College of Sciences and Humanities, and College of Design). Each student is enrolled in the department in which s/he plans to major and must meet the graduation requirements of respective department and college. All students must meet the requirements of the teacher education program and be recommended by the College of Education for admission (PRO*FILE, p. 5.1, Teacher Education Admissions Policies and Procedures, 1982).

Admission to teacher education

A student seeking admission to a teacher education program must be approved by a departmental selection committee and the college committee for the specific program which s/he seeks to enter. Factors considered in evaluating applications include scholarship, interest in

teaching, character, and physical and mental health. Recommendations by selection committees must be confirmed by the University Committee on Teacher Education before admission to the program in teacher education is granted.

Students may apply as early as three semesters before the one in which they plan to enroll for student teaching; however, they must be fully admitted into the Teacher Education Program by mid-semester prior to their planned student teaching semester. A 2.30 minimum grade-point average is required for full admission to the teacher education program and this minimum average must be maintained through graduation.

Students in the teacher education program in the College of Sciences and Humanities must earn at least six semester credits with a grade of "C" or better in courses used to meet their department's English proficiency requirement. Specific courses taken to be used for certification may not be taken pass/not pass.

Students in this study

In the fall, winter, and spring quarters of 1980-81 there were 783 students enrolled in El Ed/Sec Ed 204 (The School in American Life), the first education course in the teacher education program at Iowa State University. Of the 783 students, there were 599 female students

(76.5%) and 184 male students (23.5%). Five hundred thirteen (513, 65.5%) students started their program of study at Iowa State University and 270 students (34.5%) transferred from 1-140 hours from another institution. Three hundred twenty-four of the 783 students who were possible applicants for teacher education had graduated in this area by the spring of 1985.

Five hundred sixty-three students (72%) enrolled in the course completed the El Ed/Sec Ed 204 questionnaire with 494 (63%) having usable data. These 494 students comprise the sample used in this study. The 494 students are categorized as follows: There are 108 (21.9%) male students and 386 (78.1%) female students (Table 1).

TABLE 1. Gender of Students in Sample

Gender	N	%
Male	108	21.9
Female	386	78.1
TOTAL	494	100.0

Three-hundred twenty-three (65.4%) of the students started their program of study at Iowa State University and 171 (34.6%) transferred from 1-140 credit hours (Table 2).

TABLE 2. Transfer Status of Students in Sample

Status	N	%
Transfer	171	34.6
Native	323	65.4
TOTAL	494	100.0

By the end of the spring semester of 1985 (May, 1985), 110 (22.3%) students had dropped out of school, 262 (53%) students had graduated in teacher education, and 96 (19.4%) students had graduated from other programs. Students still in programs of study at Iowa State University, students who already held degrees, and a student who could not be classified totalled 26 students (5.1% -- Table 3).

TABLE 3. Students in the Sample Status in School

Status	N	%
Graduated in teacher education	262	53.0
Withdrew from school	110	22.3
Graduated in another program	96	19.4
Other	26	5.1
TOTAL	494	100.0

Instrument

A questionnaire was designed to obtain information from students pertaining to the following: academic, family, residential, and social backgrounds; primary reasons for enrolling in El Ed/Sec Ed 204; influence of El Ed/Sec Ed 204 on teaching as a career; various characteristics important in a job; perceptions toward education; transfer or native status; grade point average at time of transfer; marital status; prior employment; activities involved in as a participant; activities in which a leadership role was assumed; age; sex; father's and mother's occupations; residency status; high school size; and their long-range career plans. This questionnaire was developed by the Research Institute for Studies in Education at Iowa State University by Drs. Pat M. Keith, Richard D. Warren, Harold Dilts, and Ann Thompson. Questions were developed based on previous research conducted for follow-up studies and survey research as outlined by Borg and Gall (1979). Ten of the eighteen job characteristics were adapted from Rosenberg's occupational values instrument (1957, p. 12). Research on job factors by Robinson, Arthanasiou, and Head (1973) provided an additional eight items. All other items were developed by the personnel in RISE and

the College of Education to obtain information about the education program (see the Appendix for a copy of the instrument).

Procedures

At the end of each quarter of the 1980-81 school term, each instructor of El Ed/Sec Ed 204 administered a questionnaire designed to obtain information from students to evaluate and to improve the teacher education program at Iowa State University. The responses were on a voluntary basis.

SPSSx system files were created and matched using data collected for this study. A SPSSx system file is "a self-documented file containing data and descriptive information" (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1983). Data were combined from the El Ed/Sec Ed 204 questionnaire, Administrative Data Processing, and students' permanent record files. Information obtained from Administrative Data Processing included students' ACT scores, gender, transfer credits, college of enrollment (College of Education, College of Design, etc.), and high school rank. Permanent record files were used to obtain students' status information--last term in

school at Iowa State University, date of graduation, and whether teacher certification was received.

Hypotheses to be Tested

Students in this study are separated into three groupings by status in school. They are:

1. students who graduated in teacher education,
2. students who graduated in another program of study, and
3. students who withdrew from school. Hereafter, these three groups will be referred to as "those persons who took, those persons who were enrolled in, etc." unless otherwise stated in an hypothesis.

HYPOTHESIS I -- There are no significant differences in sex, transfer status, ACT scores, and high school rank among those persons who took El Ed/Sec Ed 204 during the 1980-81 school term. One-way analysis of variance was run to test differences in ACT scores and high school rank among the groups. Chi-square tests were run to test differences in gender and transfer status.

HYPOTHESIS II -- Students' stated long-range career plans at the time they were

enrolled in El Ed/Sec Ed 204 during the 1980-81 school term is independent of status in school (progression or completion in a program of study). Chi-square was used to test differences in stated long-range career plans among the three groups.

HYPOTHESIS III -- There are no significant differences in students' perception of importance of various job characteristics among those students at the time they were enrolled in El Ed/Sec Ed 204 during the 1980-81 school term and progression or completion in a program of study. One-way analysis of variance test was used to determine differences in importance of job characteristics ratings among the three groups.

HYPOTHESIS IV -- There are no significant differences in participation in activities among those students who enrolled in El Ed/Sec Ed 204 during the 1980-81 school term. One-way analysis of variance was used to test differences among the three groups relative to participation in activities.

HYPOTHESIS V -- There are no significant differences in leadership in activities among those students who enrolled in El Ed/Sec Ed 204 during the 1980-81 school term. One-way analysis of variance was used to test differences in leadership in activities among the three groups.

HYPOTHESIS VI -- There are no significant differences in ACT scores, high school rank, long-range career plans, participation in activities, leadership in activities, and perception of various job characteristics between transfer and native students who graduated in teacher education at Iowa State University. Chi-square was used to determine differences in gender and long-range career plans. t-tests were used to test all other variables.

CHAPTER IV -- FINDINGS

This research study was undertaken 1) to determine the characteristics of persons graduating in the Iowa State University teacher education program, 2) to determine if there are differences among persons who graduate in teacher education, graduate in another program, or drop out of school, and 3) to determine if there are differences between transfer and non-transfer persons graduating from the Iowa State University teacher education program.

The statement of hypotheses, statistical analyses, and findings are presented in this chapter. This chapter is divided into three sections and a discussion. The first section discusses the differences between the population and the sample. Encompassed in the second section is a discussion of the job characteristics as a result of factor analysis results using varimax rotation. Analyses of the null hypotheses will be discussed in the third section. The chapter ends with a discussion section which presents research findings from this study as they pertain to previous research as reported in Chapter II -- Review of Literature.

Characteristic Differences in Population and Sample

Seven hundred eighty-three students enrolled in the El Ed/Sec Ed 204 course, School in the American Life, during the fall, winter, and spring quarters of the 1980-81 school term comprised the population. The sample consisted of 494 students who answered the questionnaire for the above time period. Several variables were tested to determine if the sample of 494 students was similar to the total population of 783 students. t-tests were used with continuous variables. These include high school rank (HSR), number of hours transferred into Iowa State University, and the college entrance test known as ACT. High school rank is on a scale of 1 to 99, high to low respectively. Statistical significant differences were found on HSR. Students completing the questionnaire had a higher class ranking (mean=24.99) than those not completing the questionnaire (mean=28.36). Gender, college of enrollment at Iowa State University, and number of transfer hours grouped into two categories (58.5 hours or fewer and greater than 58.5 hours) were tested by chi-square. No differences were found for these three variables between the sample of 494 students and the population of 783 students.

Based on the analysis of these variables, it was concluded that the sample was representative of the total population.

Factor Analysis of Job Characteristics

To make the interpreted results more meaningful, the original 18 job characteristic items were condensed to fewer factors. A varimax rotation and extraction technique of factor analysis was used on the eighteen job characteristic items. The analysis extracted five factors,

- 1) Autonomy,
- 2) Challenge/Responsibility,
- 3) Service/People,
- 4) Creativity/Special Abilities, and
- 5) Security,

and two single items,

- 1) Opportunity to effect social change and
- 2) Adventure (Table 4).

Factors were formed by including items with loadings .40 and greater (Table 5). Cronbach's alpha technique was used to estimate reliability on the job characteristic items loaded on the different factors. The estimates ranged from .63 to .75 (Table 6) (Williams, 1985).

TABLE 4. Categories Extracted from Factor Analysis

Major Categories	Item No.	Item Statements
FACTOR 1 Autonomy	5 d	Opportunity to earn a good deal of money
	5 e	Social status and prestige
	5 g	Relative freedom from supervision by others
	5 h	Opportunity for advancement
	5 i	Opportunity to exercise leadership
FACTOR 2 Challenge/ Responsibility	5 q	Control over what others do
	5 n	Variety in work
	5 o	Responsibility
	5 p	Control over what I do
FACTOR 3 Service/People	5 r	Challenge
	5 c	Opportunity to work with people rather than things
FACTOR 4 Creativity/ Special Abilities	5 j	Opportunity to help and serve others
	5 a	Opportunity to be creative and original
	5 b	Opportunity to use special abilities and aptitudes

TABLE 4. (Continued)

Major Categories	Item No.	Item Statements
FACTOR 5 Security	5 l	Opportunity for a relatively stable and secure future
	5 m	Fringe benefits (health care, retirement benefits)
SINGLE ITEMS	5 f	Opportunity to effect social change
	5 k	Adventure

The various factors represent characteristics a person may want to find in a job. . Autonomy represents some extrinsic rewards a job could provide; items provided by achieving or working towards success in a job. Challenge/Responsibility represents the process of working towards achieving those tasks that may seem unobtainable. Service/People represents "people-oriented" items. The chance to work with, serve, and help people--a sense of accomplishment when persons have been helped in some manner. Creativity/Special abilities represents what persons actually use in performing a job, probably beyond the realm of normal effort that is exerted. Security represents rewards

TABLE 5. Factor Analysis on Job Characteristic Items

Factor Item No.	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
5 e	.74#	.04	.01	.09	.10
5 d	.59#	.02	-.11	-.01	.29
5 h	.58#	.13	-.07	.02	.24
5 i	.50#	.34	.22	.00	.15
5 q	.44#	.26	.08	-.05	.10
5 g	.43#	.09	.07	.16	.06
5 f	.32#	.09	.29	.26	.12
5 o	.12	.65#	.25	.12	.17
5 r	.06	.63#	.15	.22	.00
5 n	.18	.48#	.14	.23	.20
5 p	.29	.44#	.11	.20	.08
5 k	.23	.28#	.22	.15	.08
5 j	-.03	.19	.78#	.09	.13
5 c	.01	.26	.51#	.11	.05
5 a	.02	.20	.09	.72#	.03
5 b	.08	.24	.12	.60#	.10
5 m	.27	.16	.06	.07	.67#
5 l	.22	.11	.11	.05	.52#

#Items loading on five factors with .40 or greater relationship.

received in excess of direct monetary compensation and the feeling of safety from the loss of a job. The opportunity to effect social change represents the impact

TABLE 6. Job Characteristics Factors Reliability

Factors	Number of Items	Factor Mean	Standard Deviation	Average Correlation	Alpha
FACTOR 1 Autonomy	6	21.91	3.21	.32	.74
FACTOR 2 Challenge/ Responsibility	4	18.19	1.78	.42	.75
FACTOR 3 Service/ People	2	9.36	.98	.47	.64
FACTOR 4 Creativity/ Special Abilities	2	9.14	.98	.49	.66
FACTOR 5 Security	2	8.22	1.34	.46	.63

one has on changing the opinions held by persons and conditions present in our society. Adventure represents a sense of excitement received from achievement of work completed or excitement received when trying to accomplish a task.

Testing of Hypotheses

This section includes the analyses of the results of the null hypotheses. Each hypothesis will be stated followed by a statistical discussion of the hypothesis as tested and a table of the findings. Students in this study are separated into three groupings by status in school. They are:

1. students who graduated in teacher education,
2. students who graduated in another program of study, and
3. students who withdrew from school. Hereafter, these three groups will be referred to as "those persons who took, those persons who were enrolled in, etc." unless otherwise stated in an hypothesis.

Hypothesis I

There are no significant differences in sex, transfer status, ACT scores, and high school rank among those persons who took Ed/Sec Ed 204 during the 1980-81 school term.

Chi-square was used to test for differences in gender and transfer hours among the three groups. The variable hours transferred was coded as a dichotomous variable, one group having no hours transferred and the other group having one or more hours transferred.

TABLE 7. Gender with Status in School

Variables	Male		Female		Chi-square Value	Prob.
	Ob	Exp	Ob	Exp		
Withdrew	19	23	91	86	2.34	.31
Graduated in Teacher Education	57	57	205	206		
Graduated other	25	21	71	75		

Ob = Observed Frequency
Ex = Expected Frequency

TABLE 8. Transfer Hours with Status in School

Variables	N		Chi-square Value	Prob.
	Transfer	Native		
Withdrew	40	70	.85	.65
Graduated in Teacher Education	95	167		
Graduated other	30	66		

There were no significant differences in gender (Table 7) or number of hours transferred (Table 8) among the three groups at the .05 level of significance.

One-way analysis of variance was used to test differences among the three groups on ACT scores, HSR, and transfer hours. Transfer hours was used as a

and transfer hours. Transfer hours was used as a continuous variable in this analysis. The null hypothesis relating to differences in ACT scores and HSR among the three groups was rejected at the .05 level of significance; however, the null hypothesis relative to differences in transfer hours among the three groups was not rejected. There are significant differences among the three groups on ACT scores (Table 9) and HSR (Table 11). The Scheffé method of multiple comparison of means was used to determine where the differences occurred. Persons who withdrew from school had lower ACT scores (mean=20.49) than those who graduated in another program of study (mean=22.91--Table 10). Differences between all other pairs of groups of ACT scores and status in school were not significant. The Scheffé method of multiple comparison of means showed those persons who withdrew from school (mean=28.81) to have a lower HSR than the persons who graduated in teacher education (mean=23.05) or the persons who graduated in another program of study (mean=21.62--Table 12). No significant differences were found between those persons who graduated in teacher education and those who graduated in another program on either ACT scores or HSR. There were no significant

differences among the three groups on the number of hours transferred (Table 13).

TABLE 9. ACT Scores with Status in School

Variables	N	Mean	F Ratio	Prob.
Withdrew	84	20.49	5.36	.00**
Graduated in Teacher Education	213	21.51		
Graduated other	77	22.91		

** .01 level of significance.

TABLE 10. Scheffé Multiple Comparison--ACT Scores with Status in School

Mean	Variables	Variables		
		Withdrew	Graduated in Teacher Education	Graduated Other
20.49	Withdrew			
21.51	Graduated in Teacher Education			
22.91	Graduated Other		*	

* Denotes pairs of groups significantly different at the .05 level.

TABLE 11. HSR with Status in School

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Withdrew	93	28.81	19.80	4.49	.01
Graduated in Teacher Education	222	23.05	17.64		
Graduated other	84	21.62	15.44		

TABLE 12. Scheffé Multiple Comparison--HSR with Status in School

Mean	Variables	Variables	
		Withdrew	Graduated in Teacher Education
21.62	Graduated Other		Graduated Other
23.05	Graduated in Teacher Education		
28.81	Withdrew	*	*

* Denotes pairs of groups significantly different at the .05 level.

TABLE 13. Transfer Hours with Status in School

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Withdrew	110	11.75	20.67	.59	.56
Graduated in Teacher Education	262	11.67	23.45		
Graduated other	96	8.96			

Summary of Hypothesis I findings There were significant differences on HSR and ACT scores among persons who graduated in teacher education, persons who graduated in another program, and persons who withdrew from school; this portion of null Hypothesis I was rejected at the .05 level of significance. Those persons withdrawing from school had lower ACT scores and lower HSR than persons who graduated in another program. Persons in the group who withdrew from school also had lower HSR than those persons who graduated in teacher education. No significant differences were found in HSR and ACT scores between persons graduating in teacher education or persons graduating in another program. There were no differences found in gender or transfer hours among those persons who graduated in teacher

education, graduated in another program, or withdrew from school; this portion of null Hypothesis I was retained.

Hypothesis II

Students' stated long-range career plans at the time they enrolled in EL Ed/Sec Ed 204 during the 1980-81 school term are independent of status in school (progression or completion in a program of study).

Chi-square was used to test for significant differences in students' stated long-range career plans among persons graduating in teacher education, persons graduating in another program, and persons who withdrew from school. Career plans were grouped into three groups 1) teaching and school related, 2) business and industry, and 3) combination. The combination grouping included combined responses of 1) business and industry and teaching, 2) business and industry and school related, and 3) business and industry, teaching, and school related. The null hypothesis was rejected at the .05 significance level (Table 14). Students' stated long-range career plans at the time of enrollment in EL Ed/Sec Ed 204 were not independent of a person's status in school. The data reveal that students in different status groups have different long-range career plans. Persons graduating in teacher education chose teaching and school related long-range career plans. Persons

graduating in other programs and persons who withdrew from school chose business and industry long-range career plans. Regardless of a person's status in school, there is very little difference in their long-range career plans on the combination grouping (see Table 15 for observed and expected frequencies with status in school).

TABLE 14. Long-Range Career Plans with Status in School

Long-Range Career Plans	With- drew	Graduated in TE	Graduated Other	Chi-square Value	Prob.
Teaching & School Related	76	215	53	32.11	.00**
Business & Industry	28	29	34		
Combination	6	17	8		

** .01 level of significance.

Summary of Hypothesis II findings Students' stated long-range career plans at the time they enrolled in El Ed/Sec Ed 204 were not independent of their status in school (persons graduating in teacher education, persons graduating in another program, and persons who withdrew from school). The null hypothesis was rejected at the .05 level of significance. More persons

TABLE 15. Observed and Expected Frequencies for Status in School with Long-Range Career Plans

Variables	Withdrew		Graduated in Teacher Education		Graduated Other	
	Ob	Exp	Ob	Exp	Ob	Exp
Teaching and School Related	76	81	215	193	53	70
Business and Industry	28	22	29	51	34	19
Combination	6	7	17	17	8	6

Ob = Observed Frequency
Exp = Expected Frequency

graduating in teacher education chose teaching and school related long-range careers plans than the chi-square test predicted. This is what one would expect to occur.

Persons who graduated in another program or withdrew from school chose long-range career plans in business and industry. This is also as one would expect. Persons choosing a combination of business and industry combined with teaching and/or school related long-range career plans among the three groups revealed very similar results (the observed and expected frequencies showed very slight differences).

Hypothesis III

There are no significant differences in students' perception of importance of job characteristics among students at the time they were enrolled in El Ed/Sec Ed 204 during the 1980-81 school term and progression or completion in a program of study.

The factor analyses presented earlier in this chapter divided the eighteen job characteristic items into five factors and two single items. One-way analysis of variance was used to test Hypothesis III over each factor and the two single items among the three groups. Before each analysis, the job characteristic items for each factor/single item are listed. A Likert rating scale with the following rating was used for the job characteristic items: 5=very important, 4=important, 3=neutral, 2=unimportant, 1=very unimportant.

Factor 1--Autonomy The autonomy factor represents extrinsic rewards a job could provide; items provided by achieving or working towards success in a job. It included the following six job characteristic items:

- 5 d Opportunity to earn a good deal of money
- 5 e Social status and prestige
- 5 g Relative freedom from supervision by others
- 5 h Opportunity for advancement
- 5 i Opportunity to exercise leadership

5 q Control over what others do

The null hypothesis of no significant differences among the three groups' perceptions of autonomy in a job was rejected at the .05 level of significance. There are differences among the three groups' perceptions of importance of autonomy in a job (Table 16). Since six items were used in Factor 1, the range for the means will be six to thirty. The Scheffé multiple comparison method revealed that those persons graduating in another program (mean=22.00) wanted greater autonomy than those persons graduating in teacher education (mean=21.08) or those persons who withdrew from school (mean=20.57--Table 17). No other significant differences were found.

TABLE 16. Autonomy in a Job with Status in School

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Withdrew	110	20.57	3.53	5.78	.00**
Graduated in Teacher Education	262	21.08	2.77		
Graduated other	95	22.00	3.11		

** .01 level of significance.

TABLE 17. Scheffé Multiple Comparison--Autonomy with Status in School

Mean	Variables	Variables		
		Withdrew	Graduated in Teacher Education	Graduated Other
20.57	Withdrew			
21.08	Graduated in Teacher Education			
22.00	Graduated Other	*	*	

* Denotes pairs of groups significantly different at the .05 level.

Factor 2--Challenge/Responsibility The factor challenge/responsibility represents the process of working towards achieving those tasks that may seem unattainable. It included the following four job characteristic items:

- 5 n Variety in work
- 5 o Responsibility
- 5 p Control over what I do
- 5 r Challenge

The null hypothesis was not rejected at the .05 level of significance relative to differences among the three groups' perception of a job offering challenge and

responsibility. There were no differences among the three groups' ratings of the importance of a job providing challenge/responsibility (Table 18). There were four items in Factor Two, therefore, the means will range from four to twenty. This factor was rated important by all three groups. Regardless of a persons' status in school, variety in work, responsibility, having control over what they do, and challenge were important in a job.

TABLE 18. Challenge/Responsibility in a Job with Status in School

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Withdrew	109	17.05	2.16	1.96	.14
Graduated in Teacher Education	262	17.24	1.80		
Graduated other	96	17.26	1.87		

Factor 3--Service/People The factor service/people represents "people-oriented" items, the chance to work with, serve, and help people--a sense of accomplishment when persons have been helped in some

manner. It included the following two job characteristic items:

5 c Opportunity to work with people rather than things

5 j Opportunity to help and serve others

The null hypothesis was not rejected at the .05 level of significance relative to Factor 3, service/people. There were no significant differences among the three groups' perception about the importance of a job offering an opportunity to work with people or being able to help and serve others (Table 19). There were two items in this factor, therefore, the means will range from two to ten. This factor was rated important by all three groups. Persons in all three groups wanted a job to provide an opportunity to work with people

TABLE 19. Service/People in a Job with Status in School

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Withdrew	109	9.05	1.36	1.78	.17
Graduated in Teacher Education	261	9.25	1.05		
Graduated other	95	9.04	1.20		

rather than things and to be able to help and serve others. This would suggest that persons in all three groups are "people/service oriented".

Factor 4--Creativity/Special abilities This factor represents what persons actually use in performing a job, probably beyond the realm of normal effort. It included the following two job characteristic items:

- 5 a Opportunity to be creative and original
- 5 b Opportunity to use special abilities or aptitudes

The null hypothesis relative to differences among the three groups ratings on the creativity/special abilities factor was not rejected at the .05 significance level. The statistical analysis revealed no significant differences among the three groups' perceptions of the importance of a job providing an opportunity to be creative and original or to use special abilities or aptitudes (Table 20). There are two items in this factor, therefore, the means will range from two to ten. This factor was rated important by all three groups. Regardless of a persons' status in school, an opportunity to be creative and original and to use special abilities or aptitudes were found to be important in a job. This would suggest that persons in this study enjoyed work

where self-expression through abilities and aptitudes could be used.

TABLE 20. Creativity/Special Abilities in a Job with Status in School

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Withdrew	110	8.75	1.13	.38	.69
Graduated in Teacher Education	262	8.67	1.11		
Graduated other	96	8.71	1.08		

Factor 5--Security The factor security included the following two job characteristic items:

- 5 l Opportunity for a relatively stable and secure future
- 5 m Fringe benefits (health care, retirement benefits)

The null hypothesis relative to no differences among the three groups' ratings on the security factor was not rejected at the .05 significance level. There were no significant differences among the three groups' perception of a job providing a relatively stable and secure future and fringe benefits (Table 21). There are

two items in this factor, therefore, the means will range from two to ten.

TABLE 21. Security in a Job with Status in School

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Withdrew	110	7.80	1.74	.10	.91
Graduated in Teacher Education	262	7.86	1.28		
Graduated other	96	7.79	1.53		

Single item The following job characteristic item did not load at the .40 cut off level with any other job characteristic item:

5 f Opportunity to effect social change

This item represents the impact one has on the opinions held by persons and conditions in our society.

The null hypothesis of no significant difference among the three groups' perception of a job offering an opportunity to effect social change was not rejected at the .05 significance level (Table 22).

Single item The following job characteristic item did not load at the .40 cut off level with any other job characteristic item:

5 k Adventure

This item represents a sense of excitement received from the achievement of work completed, excitement received when trying to accomplish a task or the excitement associated with trying to accomplish a task.

The null hypothesis was not rejected at the .05 significance level. There are no differences among the three groups' perception of a job providing adventure.

TABLE 22. Social Change in a Job with Status in School

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Withdrew	109	3.42	.87	1.43	.24
Graduated in Teacher Education	262	3.53	.74		
Graduated other	96	3.60	.83		

TABLE 23. Adventure in a Job with Status in School

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Withdrew	109	3.76	.91	.50	.62
Graduated in Teacher Education	262	3.85	.84		
Graduated other	96	3.86	.83		

Summary of Hypothesis III findings Of the five factorial items and the two single items, significant differences were revealed for one factorial item, autonomy. There were significant differences among persons graduating in teacher education, persons graduating in another program, and persons withdrawing from school ratings on perceptions of the importance of a job providing autonomy. Persons graduating from another program had a higher average rating on the autonomy factor than either persons graduating in teacher education or persons withdrawing from school. The autonomy item included importance of a job providing 1) opportunity to earn a good deal of money, 2) social status and prestige, 3) relative freedom from supervision by others, 4) opportunity for advancement, 5) opportunity to exercise leadership, and 6) control over what others do; this aspect of Hypothesis III was rejected at the .05 level of significance, all other aspects of this hypothesis was retained. No significant differences were found among persons graduating in teacher education, persons graduating in another program, and persons who withdrew from school on the other four factorial items (Challenge/Responsibility, Service/People, Creativity/

Special Abilities, and Security) and the two single items (Adventure and Opportunity to effect social change).

Hypothesis IV

There are no significant differences in participation in activities among those students who enrolled in El Ed/Sec Ed 204 during the 1980-81 school term.

The variable "participation in activities" was combined by using possible activities to form two groupings: school related and non-school related. The school related grouping was further divided into school related non-sports and school related sports. The school related activities grouping included varsity sports, intra-mural sports, school music activities, FFA or FHA, speech/debate, student council, cheerleading, school newspaper/yearbook, and honor society. The school related non-sports activities grouping included FFA or FHA, speech/debate, student council, school music activities, school newspaper/yearbook, and honor society. The grouping school related sports activities included varsity sports, intra-mural sports, and cheerleading. The non-school activities grouping included 4-H, scouts, church youth activities, youth camps, and foreign travel. One-way analysis of variance was used to test differences of the number of activities participated in among persons

graduating in teacher education, persons graduating in another program, and persons who withdrew from school. Significant differences were found on one of the four "participation in activities combinations" among the three groups at the .05 level of significance (Table 24).

TABLE 24. Participation in Activities with Status in School (Non-School Related Activities)

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Graduated other	110	1.85	1.28	5.37	.01**
Graduated in Teacher Education	262	2.29	1.15		
Withdrew	96	2.07	1.30		

** .01 level of significance.

The Scheffé method of multiple comparison of means showed those persons graduating in teaching education (mean=2.29) to have participated in more non-school related activities than those persons who withdrew from school (mean=1.85--Table 25). No other significant differences were found among the three groups. There were no significant differences in non-sports school related activities (Table 26), sports school related (Table 27), or school activities (Table 28) among persons

graduating in teacher education, persons graduating in another program, and persons who withdrew from school.

TABLE 25. Scheffé Multiple Comparison--Participation in Activities with Status in School (Non-School Related Activities)

Mean	Variables	Variables		
		Withdrew	Graduated Other	Graduated in Teacher Education
1.85	Withdrew			
2.07	Graduated Other			
2.29	Graduated in Teacher Education *			

* Denotes pairs of groups significantly different at the .05 level.

TABLE 26. Participation in Activities with Status in School (Non-Sports School Related Activities)

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Withdrew	110	1.29	1.23	.66	.52
Graduated in Teacher Education	262	1.40	1.24		
Graduated other	96	1.49	1.28		

Summary of Hypothesis IV findings Significant differences were found in one of four groupings of "participation in activities" among the those persons graduating in teacher education, persons graduating in another program, and persons who dropped out of school. Those persons graduating in teacher education participated in more non-school related activities than persons who dropped out of school. No differences were found in the number of non-sports school related activities, sports school related activities, or school related activities participated in among persons graduating in teacher education, persons graduating in another program, and persons who dropped out of school.

TABLE 27. Participation in Activities with Status in School (Sports School Related Activities)

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Withdrew	110	1.92	1.02	.84	.43
Graduated in Teacher Education	262	2.06	.98		
Graduated other	96	2.05	1.02		

TABLE 28. Participation in Activities with Status in School (School Related Activities)

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Withdrew	110	3.21	1.84	1.02	.36
Graduated in Teacher Education	262	3.46	1.77		
Graduated other	96	3.54	1.86		

Hypothesis V

There are no significant differences in leadership in activities among those students who enrolled in El Ed/Sec Ed 204 during the 1980-81 school term.

The variable "leadership in activities" was combined to form three groupings: leadership in non-school activities, leadership in school related activities, and leadership in school level activities. The non-school activities included 4-H, scouts, church youth activities, youth camp, and foreign travel. The school related activities included varsity sports, intra-mural sports, youth choir or band, and student government. The school level activities included nursery school, elementary school, and secondary school. One-way analysis of variance was used to test differences of the number of activities participated in as a leader among persons

graduating in teacher education, persons graduating in another program, and persons who dropped out of school. There were significant differences in the number of non-school activities participated in as a leader among the three groups (Table 29). Scheffé multiple comparison between means showed those persons graduating in teacher education (mean=1.03) participated in more non-school activities as leaders than persons who dropped out of

TABLE 29. Leadership in Activities with Status in School (Non-School Related Activities)

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Withdrew	110	.69	.97	4.75	.01**
Graduated in Teacher Education	262	1.03	.98		
Graduated other	96	1.00	1.05		

** .01 level of significance.

school (mean=.69--Table 30). No other significant differences were found. There were no significant differences found relative to the number of activities participated in as a leader for school related activities (Table 31) or school level activities among the three groups (Table 32).

Summary of Hypothesis V findings There were no significant differences in the number of activities participated in as a leader for school level activities or school activities among persons graduating in teacher education, persons graduating in another program, and persons who dropped out of school; these aspects of the null hypothesis was retained. Differences were found in the number of activities participated in as a leader in non-school activities between persons graduating in teacher education and persons who dropped out of school; this aspect of the null hypothesis was

TABLE 30. Scheffé Multiple Comparison--Leadership in Activities with Status in School (Non-School Related Activities)

Mean	Variables	Variables		
		Withdrew	Graduated Other	Graduated in Teacher Education
.69	Withdrew			
1.00	Graduated other			
1.03	Graduated in Teacher Education			*

* Denotes pairs of groups significantly different at the .05 level.

TABLE 31. Leadership in Activities with Status in School
(School Related Activities)

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Withdrew	110	.73	.93	.38	.69
Graduated in Teacher Education	262	.74	.86		
Graduated other	96	.82	.98		

TABLE 32. Leadership in Activities with Status in School
(School Level Activities)

Variables	N	Mean	Standard Deviation	F Ratio	Prob.
Withdrew	110	.50	.67	2.32	.10
Graduated in Teacher Education	262	.57	.70		
Graduated other	96	.40	.62		

rejected. Persons who graduated in teacher education participated in more non-school activities as leaders than persons who dropped out of school.

Hypothesis VI

There are no significant differences in ACT scores, high school rank, gender, long-range career plans, students' perception on

importance of job characteristics, participation in activities, and leadership in activities between transfer and native students who graduated in teacher education at Iowa State University.

Approximately one-third of the students in the original population were transfer students. This same percentage was observed throughout the following sampling: there were 783 students in the population--513 (65.5%) were native students and 270 were transfer students (34.5%). Of the 494 students in the sample, 323 (65.4%) were native students and 171 (34.6%) were transfer students. There were 262 students who graduated in the Iowa State University teacher education program: 167 (63.7%) were native students and 95 (36.3%) were transfer students.

Chi-square was used to test for differences in gender and long-range career plans. t-tests were used to test for differences in ACT scores, HSR, students' perception on importance of job characteristics, participation in activities, and leadership in activities. No differences were found in gender, long-range career plans (Table 33), ACT scores, HSR, perceptions of importance of job characteristics (Table 34), participation in activities, and leadership in activities (Table 36) between transfer and native

students who graduated in teacher education. Differences were found in Factor Two of the job characteristic items between transfer and native students who graduated in teacher education. Native graduates in teacher education had a higher rating (mean=17.41) on Factor Two, challenge/responsibility, than persons who transferred from another institution (mean=16.94). No differences were found in any of the other factors or the two single items of job characteristic items between the two groups (Table 34).

TABLE 33. Gender and Long-Range Career Plans with Native/Transfer Status

Variables	Transfer		Native		Chi-square Value	Prob.
	Ob	Exp	Ob	Exp		
<u>Gender</u>						
Male	20	21	75	74	.003	.96
Female	37	36	130	131		
<u>L-RCP</u>						
Teaching & School Related	131	137	84	77	4.98	.08
Business & Industry	23	19	6	11		
Combination	13	11	4	6		
L-RCP = Long-Range Career Plans						
Ob = Observed Frequency						
Exp = Expected Frequency						

TABLE 34. ACT Scores, HSR, Job Characteristics with Native/Transfer Status

Variables	N	Mean	Standard Deviation	t value	Prob.
<u>ACT Scores</u>					
Native	157	21.66	4.43	.83	.41
Transfer	56	21.07	5.06		
<u>HSR</u>					
Native	165	21.56	16.37	-1.93	.06
Transfer	57	27.33	20.45		
<u>Autonomy</u>					
Native	167	21.02	2.86	-.46	.64
Transfer	95	21.19	2.63		
<u>Challenge/Responsibility</u>					
Native	167	17.41	1.68	2.08	.04*
Transfer	95	16.94	1.96		
<u>Service/People</u>					
Native	167	8.68	1.11	.17	.87
Transfer	95	8.65	1.12		
<u>Creativity/Special Activities</u>					
Native	167	8.68	1.11	.17	.87
Transfer	95	8.65	1.12		
<u>Security</u>					
Native	167	7.77	1.27	-1.49	.14
Transfer	95	8.30	1.30		

*.05 level of significance.

TABLE 34. (Continued)

Variables	N	Mean	Standard Deviation	t value	Prob.
<u>Social Change</u>					
Native	167	3.53	.76	-.22	.83
Transfer	95	3.55	.70		
<u>Adventure</u>					
Native	167	3.84	.87	-.33	.75
Transfer	95	3.87	.80		

Summary of Hypothesis VI findings There were no differences in HSR, ACT scores, gender, long-range career plans, participation in activities, leadership in activities, the two single item job characteristics, and four of the five job characteristic factors between persons who transferred and persons who were native students; these aspects of the null hypothesis were retained. However, persons who transferred rated Factor 2 of job characteristic items, challenge/responsibility, lower than native students; this aspect of the null hypothesis was rejected.

Discussion

Studies have been conducted in the past on characteristics of students in teacher education,

Table 35. Participation in and Leadership in Activities with Native/Transfer Status

Variables	N	Mean	Standard Deviation	t value	Prob.
PARTICIPATION IN ACTIVITIES					
<u>School Related</u>					
Native	167	3.56	1.75	1.20	.23
Transfer	95	3.28	1.82		
<u>Non-School</u>					
Native	167	2.34	1.16	.84	.40
Transfer	95	2.21	1.15		
<u>School Sports</u>					
Native	167	2.12	.94	1.29	.20
Transfer	95	1.96	1.04		
<u>Non-School Sports</u>					
Native	167	1.44	1.27	.70	.49
Transfer	95	1.33	1.18		
LEADERSHIP IN ACTIVITIES					
<u>Non-School</u>					
Native	167	1.06	.98	.64	.52
Transfer	95	.98	.98		
<u>School Activities</u>					
Native	167	.75	.82	.44	.66
Transfer	95	.71	.93		
<u>School Level</u>					
Native	167	.56	.67	.36	.72
Transfer	95	.59	.75		

however, the majority of these studies were conducted during the 1950s to late 1960s. The scarcity of studies since this time period has left the area of teacher education with a void of research pertaining to persons to whom are entrusted the responsibility to shape and to develop the lives of students in our elementary and secondary schools. In order to provide information to address this issue, this study was undertaken. The purpose of this study was to determine if there were differences among persons who enrolled in the El Ed/Sec Ed 204 course, The School in American Life, relative to their persistence in school. This information should be used with caution, as it may only be generalizable to persons attending the teacher education program at Iowa State University. Two possibilities for this research are that this information will be used for counseling purposes for students considering teacher education as a career and as a foundation for persons interested in further research as a one-, five-, and/or ten-year follow-up study of the same persons.

Several hypotheses were generated and tested to determine characteristic similarities and differences among persons who graduated in teacher education, graduated in another program, or dropped out of school.

The discussion in this section will focus on these hypotheses, their findings, and the comparison of these research findings and previous research as reported in the Review of Literature section.

Personal and academic characteristics

This study shows, as previous research has, that women are still the most representative group of persons choosing teaching as a career (Charters, 1963; Ryan & Phillips, 1982; Grant & Synder, 1983-84). Persons withdrawing from school had the lowest high school rank and ACT scores. The assumption would be that these persons withdrew because of academic failure. Additional research is needed on students who drop out of school to determine probable reasons for withdrawal.

This study did not support research findings of teacher education attracting students with low academic standing. Iowa State University attracts students of high academic standing to its teacher education program. Iowa State University teacher education students in this study have an average ACT score of 21.51 as compared to Feistritz's (1984) national report of 17.4 and The American College Test Program's scores of 17.2 - 17.8 for the students with an interest in education. The high ACT scores of Iowa State University teacher education

students, however, is probably due to the fact that the University is located in a state with an average ACT score of 20.2. Persons graduating in other programs in this study had an average ACT score of 22.91.

Long-range career plans

Persons graduating in teacher education chose teaching and school related long-career plans. This suggests that many of the persons graduating in teacher education want jobs in teaching or a related occupation. Persons make career choices at various periods in time. Females have been shown to make career choices early in life, in elementary school, and men tend to make their career choice in later high school years and/or early college years (Mori, 1966; Fielstra, 1955; Richards, 1960; and Mangieri & Kemper, 1984). The data obtained from the questionnaire used in this study was during a sophomore level course. Therefore, it is felt that career choices were made by the time persons enrolled in the El Ed/Sec Ed 204 course.

Job characteristics

The importance of a job to provide certain rewards and/or benefits has often been considered the reasons for a person choosing or failing to choose an occupational

area. Mori (1966) and Fox (1961) found persons in teacher education to rank salary as an important factor in considering the teaching profession. The Phi Delta Kappan Gallup Polls (1981, 1984) revealed that teaching is no longer an occupation that is associated with a good salary. Persons graduating in teacher education did not rate the factor including salary as important as persons graduating in other programs. This would suggest that this is not as important in a job to persons who want to be teachers. This supports research by Mangieri and Kemper (1984) and Allison (1982) that persons considering teacher education as a career do not choose salary nor social status and prestige as important factors for career choice. This study supports Freeman's (1979) research findings indicating challenge to be an important factor for persons choosing teaching.

Participation in and leadership in activities

Research has indicated that participation in and leadership assumed in school and non-school activities tend to impact on the career choice a person will make (Martin, 1944; and reported by Chen, 1982 in studies by Endicott and Bear and Brown). Persons graduating in teacher education never ranked third in participation in

activities or leadership in activities, but rather first or a very, very close second.

Transfer and non-transfer students in teacher education

Transfer students have been found to have higher or similar academic standing as native students (Richardson & Doucette, 1980; Martorana & Williams, 1954; Klitzke, 1961). These findings were supported by this study. Transfer students have also been found to be on probation, have lower grades in upper division, have higher attrition rates, and were less likely to graduate (Kissler, 1980; Kissler et al. 1981). This study revealed an unexpected difference on the perceptions of the importance of a job providing certain characteristics. This researcher is not sure why native students rated the factor responsibility/challenge higher than students who transferred. However, some possibilities may include the following: students who enter a four-year institution as a native student have to assume a responsibility for making decisions about new friends, participation in activities, involvement in large-class sessions, etc. In other words, taking the initiative for becoming members of and fitting into a "different culture."

Very little difference is found among the groups in this study. One would not, however, expect great variability among the groups due to their homogeneity. Persons in the study were basically from Iowa or from the mid-west, stated similar reasons for enrollment in the El Ed/Sec Ed 204 course, and had group ACT score averages above the national average.

CHAPTER V -- SUMMARY AND RECOMMENDATIONS

This study was undertaken to determine the characteristics of persons graduating in teacher education; to determine if there were differences among persons who enrolled in El Ed/Sec Ed 204, The School in American Life, and graduated in teacher education, graduated in another program, or dropped out of school; and to determine if there were differences between transfer and native students who graduated in teacher education. The focus and quantity of studies determining the characteristics of persons in teacher education programs received little attention during decade of the 1970s to the present.

This study was based on research data collected by the Research Institute for Studies in Education (RISE) at Iowa State University and the researcher. These data included the El Ed/Sec Ed 204 questionnaire, status in school data (graduating in teacher education, graduating in another program, or dropped out of school), and information obtained from University records (HSR, ACT scores, etc.). There were 783 students enrolled in El Ed/Sec Ed 204 with 494 answering the questionnaire and who were subsequently used in this study.

Several types of statistical analyses were used to determine differences among the students in the study. Chi-square was used to test for differences in gender, long-range career plans, and transfer status. One-way analysis of variance and t-tests were used to test for differences in ACT scores, HSR, transfer hours, job characteristic items, participation in activities, and leadership in activities.

Summary

The following were the findings of this study:

1. No significant differences were found between persons graduating in teacher education and persons graduating in other programs of study on HSR or ACT scores. Persons who graduated in another program had higher ACT scores and a higher HSR than persons who dropped out of school. Persons who graduated in teacher education had a higher HSR than persons who dropped out of school. No differences were found in gender or transfer hours among the three groups.

2. Persons graduating in teacher education chose teaching and school related long-range career plans. Persons graduating in another program and those who withdrew from school chose business and industry long-range career plans. A person's status in school had no effect on their choice of a combination of long-range career plans--business and industry and teaching, business and industry and school related, and business and industry, teaching, and school related.
3. Persons who graduated in teacher education, graduated in another program, and dropped out of school rated both single items and four of the five factors similar. Persons graduating in another program rated the job characteristic factor item autonomy higher than persons in the other two groups.

4. Persons who graduated in teacher education participated in a greater number of non-school related activities than persons who dropped out of school. No differences were found in the number of school related activities, sports school related activities, and non-sports school related activities among the three groups.
5. Persons graduating in teacher education participated in a greater number of non-school related activities as leaders than persons who dropped out of school. There were no differences found in the number of leadership roles assumed in school level activities or school activities among the three groups.
6. No differences were found in HSR, ACT scores, gender, long-range career plans, participation in activities, leadership in activities, the two single job characteristics items, and

four of the five factor job characteristics between native and transfer students. Native students rated the responsibility/challenge factor higher than students who transferred.

Recommendations

Based on the findings from this research, the following are recommended for additional study:

1. Replication of this study with students from other El Ed/Sec Ed 204 courses. With the publication of A Nation at Risk and other reports, studies are needed by subject area to determine if there are differences in persons academic standing and other characteristics, as well as determining if more persons from the science and mathematic areas will choose teaching as a career.
2. Follow-up studies of persons in this study to determine changes in their responses on significant similar items, such as job characteristic items, on subsequent questionnaires used to obtain data from

students as they complete school, graduate, and obtain jobs. Some of the items from the questionnaire in this study are used on subsequent studies conducted by RISE. By conducting follow-up studies, information can be obtained relative to a persons' perceptions about job characteristic items changing over a period of time to determine why persons stay in various professions.

3. The number of transfer students attending school suggests additional research is needed on this group to determine how they progress, persist, and achieve degrees in programs of study at Iowa State University and about the type(s) of institutions from which they transferred. Are the students who transfer progressing at the same rate as native students? Are there differences in students abilities and characteristics associated with the type(s) of institutions from which they transfer? This study dealt with the transfer students as a group not as subgroups based on transferred

institutions or subject area
specialization.

4. Since the research findings are basically generalizable to a single university, studies where national data are used is recommended to determine if more generalizable information can be obtained.
5. Research is needed to determine when students start to formulate ideas of teaching as a career, and persons and events that contributed to the choosing of teaching as a long-range career plan. This type of research can support other research findings of this nature and will help to reinforce the concept of "mentorship/modeling" and the need for "good" teachers.

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APPENDIX

Iowa State University of Science and Technology Ames, Iowa 50011



College of Education
202 Quadrangle
Telephone 515-294-7002

May 12, 1981

Dear Teacher Education Student:

We are currently engaged in a research project designed to evaluate and improve the Teacher Education Program here at Iowa State University.

Students in various phases of the program are being contacted to participate in the study. As a student beginning your Teacher Education classes, you can provide valuable information for our project. Your voluntary participation would be greatly appreciated.

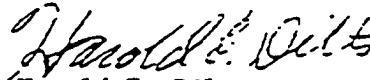
You may be assured of complete confidentiality. We ask for your social security number for data analysis procedures, to match with instructor class information such as year in school and curriculum, and evaluations of the Teacher Education Program as you progress through your program and careers. New identification numbers are assigned for data analysis and the information is analyzed in terms of groups, not in terms of individuals. Names and social security numbers are used only for contacting and matching purposes. The information provided is for use in this research project only.

We ask that you complete the enclosed questionnaire and return it by the end of the class period.

Thank you for your assistance in our project; the information you provide should help us to continually improve the Teacher Education Program.

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

Sincerely,


Harold E. Dilts
Associate Dean

/st

Enc.

First we would like to ask you some questions about your current relationship with the Teacher Education Program.

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1. Please check the response which best describes your current position on applying to the Iowa State Teacher Education Program.

- I have been admitted to Teacher Education
- I have applied for admission to Teacher Education
- I plan to apply for admission to Teacher Education
- I am uncertain on whether or not I will apply for admission to Teacher Education
- I plan to complete a Teacher Education Program at another institution
- I do not plan to apply to a Teacher Education Program

2. Check the response which best describes your primary reason for enrolling in Education 204.

- It is a requirement for the Teacher Education Program
- I wanted to obtain more information on a teaching career
- My advisor recommended the class
- Friends recommended the class
- It was the only class available at this time
- Other ----> Specify _____

3. In what way has Education 204 influenced your decision on teaching as a career?

- It has confirmed my previous decision to become a teacher
- It has caused me to decide to become a teacher
- It has confirmed my previous decision not to become a teacher
- It has caused me to decide not to become a teacher
- It has caused uncertainty about my decision to become a teacher
- It has caused uncertainty about my decision not to become a teacher
- It has not affected my decision

Now, we would like to ask you some questions about your plans for the future.

4. What is your current long-range career plan?

- Elementary Teaching ----> Specify Specialty Area(s) (if any) _____
- Secondary Teaching ----> Specify Subject Area(s) _____
- K-12 Teaching ----> Specify Subject(s) _____
- College or University Teaching ----> Specify Subject(s) _____
- School Counselor
- School Administrator
- Business or Industry ----> Specify _____
- Government Employment (Other Than Military) ----> Specify _____
- Military
- Full-time Homemaker
- Other ----> Specify _____

5. How important is it that a job provide you with the following characteristics? Please circle one number for each characteristic. Use the following response categories.

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- Very Important.....5
- Important.....4
- Neutral.....3
- Unimportant.....2
- Very Unimportant.....1

Please circle your response

a.	Opportunity to be creative and original...	5	4	3	2	1
b.	Opportunity to use special abilities or aptitudes.....	5	4	3	2	1
c.	Opportunity to work with people rather than things.....	5	4	3	2	1
d.	Opportunity to earn a good deal of money..	5	4	3	2	1
e.	Social status and prestige.....	5	4	3	2	1
f.	Opportunity to effect social change.....	5	4	3	2	1
g.	Relative freedom from supervision by others.....	5	4	3	2	1
h.	Opportunity for advancement.....	5	4	3	2	1
i.	Opportunity to exercise leadership.....	5	4	3	2	1
j.	Opportunity to help and serve others.....	5	4	3	2	1
k.	Adventure.....	5	4	3	2	1
l.	Opportunity for a relatively stable and secure future.....	5	4	3	2	1
m.	Fringe benefits (health care, retirement benefits).....	5	4	3	2	1
n.	Variety in the work.....	5	4	3	2	1
o.	Responsibility.....	5	4	3	2	1
p.	Control over what I do.....	5	4	3	2	1
q.	Control over what others do.....	5	4	3	2	1
r.	Challenge.....	5	4	3	2	1

Now, we would like to ask you some questions about yourself.

6. What quarter and year did you begin work at Iowa State?

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7. What was your approximate rank in your high school graduating class?
(Check one)

- (a) top 20%
- (b) second 20%
- (c) middle 20%
- (d) fourth 20%
- (e) lowest 20%

8. Did you transfer to Iowa State from another college or university?
(Check one)

- Yes ----> Go to Question 9
- No ----> Go to Question 11

9. (Transfers only) When you entered Iowa State, what was your classification?

- | | |
|--|---|
| <input type="checkbox"/> First Quarter Freshman | <input type="checkbox"/> First Quarter Sophomore |
| <input type="checkbox"/> Second Quarter Freshman | <input type="checkbox"/> Second Quarter Sophomore |
| <input type="checkbox"/> Third Quarter Freshman | <input type="checkbox"/> Third Quarter Sophomore |
| <input type="checkbox"/> First Quarter Junior | <input type="checkbox"/> Other |

10. (Transfers only) What was your approximate grade point average at the time of transfer? (Check one)

- below 2.0
- 2.01 - 2.5
- 2.51 - 3.0
- 3.01 - 3.5
- Above 3.5

11. What is your current marital status? (Check one)

- Single
- Married
- Married, one or more children
- Other (Widowed, Separated, Divorced)

12. Have you worked in a full-time (40 hours per week) job? (Check one)

- Never ----> skip to 14
- Occasionally ----> (including summers and vacations)
- Continuously for from 1 - 3 years
- Continuously for more than 3 years

13. Please describe the occupation in which you worked the majority of the time. (Please be specific)

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14. Please check any of the following activities in which you have been involved as a participant.

- 4-H
- Scouts
- Varsity Sports
- Intra-mural Sports
- Church Youth Activities
- Youth Camps
- Foreign Travel
- School Music Activities
- FFA or FHA
- Speech/Debate
- Student Council
- Cheerleading
- School Newspaper/Yearbook
- Honor Society
- Service Clubs ----> Please Specify _____
- Interest Clubs ----> Please Specify _____
- Other ----> Please Specify _____
- Other ----> Please Specify _____

15. Please check any of the following activities in which you have been involved as a leader, counselor, coach or aide.

- 4-H
- Scouts
- Varsity Sports
- Intra-mural Sports
- Church Youth Activities
- Youth Camps
- Foreign Travel
- Youth Choir or Band
- Nursery School
- Elementary School
- Secondary School
- Student Government
- Other ----> Please Specify _____

16. What is your age? _____

17. Sex: (Circle) M F

18. What is your Social Security Number? _____

19. What was your father's occupation most of the time while you were living at home? (Please be specific)

20. What was your mother's occupation most of the time while you were living at home? (Please be specific)

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21. Are you currently a resident of Iowa? (Please check) YES NO
If "NO", what is your state or country of residency? _____

22. What was the approximate size of your high school graduating class? (Please check one)

- (a) 0 - 100 students _____
- (b) 101 - 250 students _____
- (c) 251 - 500 students _____
- (d) 501 - 1000 students _____
- (e) Over 1000 students _____

Now we would like to ask you questions about your current attitudes toward education.

23. What do you think are the two most serious problems in the public schools today?

(1) _____

(2) _____

24. What two things do you think the public schools are doing most effectively today?

(1) _____

(2) _____

25. Please think about the best teacher you know or have known. What were the characteristics that made that teacher outstanding?

(1) _____

(2) _____

(3) _____