Ethnic stereotypes held by prospective elementary school teachers

Mary Koen Aldridge

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Ethnic stereotypes held by prospective elementary school teachers

by

Mary Koen Aldridge

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

Department: Professional Studies Major: Education (Curriculum and Instructional Media)

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CHAPTER I. INTRODUCTION

Educators, recognizing the pluralistic nature of American society, are rethinking traditional programs and focusing attention on the development of a multicultural curriculum to make it more relevant to current social needs. The American Association of Colleges of Teacher Education has issued the following statement:

Multicultural education is education which values cultural pluralism. Multicultural education rejects the view that schools should seek to melt away cultural differences or the view that the school should merely tolerate cultural pluralism. Instead, multicultural education affirms that schools should be oriented toward the cultural enrichment of all children and youth through programs rooted to the preservation and extension of cultural diversity as a fact of life in American society, and it affirms that this cultural diversity is a valuable resource that should be preserved and extended. It affirms that major education institutions should strive to preserve and enhance cultural pluralism (Hunter, 1974, p. 21).

If this change is to be effected, many teachers and administrators will need to expand involvement in ethnic studies and inform themselves about the various cultural groups within the total society. Banks (1976) states that there is a need to examine basic assumptions upon which curriculum decisions have been made in the past and to formulate new assumptions and goals in order for ethnic studies to lead to a multicultural curriculum. Hunter (1974) agrees that cultural diversity should be reflected throughout the total
organizational structure of the educational system (Abrahams, 1971; Hunter, 1974; Banks, 1976).

The key to curriculum reform rests with commitment and understanding of diverse cultures by classroom teachers as their unique role places them in the position of interpreting and implementing program and policy (Ulibarra, 1960; Heller, 1967; Baty, 1972; Faunce, 1968, 1969; Hunter, 1974; Jensen and Rosenfeld, 1973; Wasserman, 1976).

A high correlation has been found between teacher effectiveness with children from ethnic minority groups; and their attitudes toward various ethnic groups, however, investigators note that further research is indicated (Noll and Noll, 1963; Faunce, 1968, 1969).

Teachers who have had a greater number of experiences with children from different ethnic groups and those who have completed graduate work or inservice training in working with culturally different children appear to perceive them more favorably (Purl and Curtis, 1970; Anderson, 1969; Lopez and Piper, 1974). It has been found that teachers who work with children from different cultural backgrounds do express a strong desire for additional training in multicultural education (Faunce, 1969). Although there is a shortage of teachers with special training for working with culturally different children, colleges and universities are presently doing very little in the area of teacher preparation (Baty, 1972; Rodriguez, 1970).
The Problem

Statement of the problem

The present study was designed to identify ethnic stereotypes held by prospective elementary school teachers and to investigate relationships of these stereotypic beliefs to selected background information. Results were considered to be of value for planning preservice education programs which would more adequately meet the objectives of a multicultural curriculum.

Hypotheses to be tested

There were four major research questions included in the investigation: relationships among stereotypes of five ethnic groups, comparison of stereotypes held by males and females, relationships between future teaching assignment aspirations and ethnic stereotypes, and relationships between selected biographical characteristics and ethnic stereotypes.

The first research question examined the relationships between stereotypes held by prospective elementary school teachers for the White, Black, Hispanic-American, Asian-American, and Native American ethnic groups. The hypothesis derived from the question was:

\[ H_0_1 : \text{There is no significant difference in stereotypes held by prospective elementary school teachers of the five ethnic groups: White, Black, Hispanic-American, Asian-American, and Native American as measured by the Semantic-Differential technique.} \]
A second question dealt with a comparison of stereotypes held by prospective elementary school teachers who are male and those who are female. The following hypothesis was tested.

\( H_0^2: \) There is no significant difference in ethnic stereotypes held by prospective elementary teachers who are male and those who are female.

It was considered that there could be significant relationships between teaching position aspirations and stereotypic views of ethnic groups. Hypotheses tested were:

\( H_0^{3a}: \) There is no significant difference in ethnic stereotypes held by students who aspire to be teachers in the lower elementary grades and those who aspire to be teachers in the upper elementary grades.

\( H_0^{3b}: \) There is no significant difference in ethnic stereotypes held by students who aspire to teach atypical children and those who aspire to teach in regular classrooms.

\( H_0^{3c}: \) There is no significant difference in ethnic stereotypes held by students who expect to teach in Iowa and those who expect to teach outside the state.

\( H_0^{3d}: \) There is no significant difference in ethnic stereotypes held by students who expect to teach in urban centers and those who expect to teach in the suburbs or rural communities.

The fourth question dealt with the significance of relationships between selected biographical characteristics and ethnic stereotypes held by prospective elementary school teachers. For this question the following hypotheses were tested:
Ho\textsubscript{4a}: There is no significant relationship between the educational attainment of fathers of prospective elementary school teachers and the ethnic stereotypes they hold.

Ho\textsubscript{4b}: There is no significant relationship between the educational attainment of mothers of prospective elementary school teachers and the ethnic stereotypes they hold.

Ho\textsubscript{4c}: There is no significant relationship between the occupation of fathers of prospective elementary school teachers and the ethnic stereotypes they hold.

Ho\textsubscript{4d}: There is no significant relationship between the occupation of mothers of prospective elementary school teachers and the ethnic stereotypes they hold.

Ho\textsubscript{4e}: There is no significant relationship between the size of home towns in which prospective elementary teachers were reared and the ethnic stereotypes they hold.

Ho\textsubscript{4f}: There is no significant difference in ethnic stereotypes held by prospective elementary school teachers who have always lived in Iowa and those who have lived at least 5 years outside the state.

**Definitions of Terms Used**

**Culture.** The term described the way of life of a people; specifically, the shared learned behavior of members of a society (Iowa DPI, 1975b).

**Cultural pluralism.** The term was used to describe a system which provides for the inclusiveness and diversity of all groups, racial, ethnic, socio-economic, and religious and which rejects diviseveness and exclusion of any group(s) and individual(s) (Iowa DPI, 1975b).
Cultural group. The term was applied to a category of persons who share common experiences because of ethnicity (Iowa DPI, 1975b).

Ethnic group. The term was applied to "... a category of persons who support a set of values, beliefs and symbols common to a particular national heritage but who also share the broader set of values, beliefs and symbols that characterize the United States culture" (Iowa DPI, 1975b, p. 5).

Minority group. The term was applied to a category of persons who share a common culture and who have in the past been denied full recognition and full participation in the society of the United States.

White ethnic group. The term was used to denote the concept of Americans living in the United States who were of northern European descent.

Black ethnic group. The term was used to denote the concept of Americans living in the United States who were of African descent.

Hispanic-American ethnic group. The term was used to denote the concept of Americans living in the United States who were of Mexican, Spanish, Cuban, Puerto Rican, or South American descent.

Asian-American ethnic group. The term was used to denote the concept of Americans living in the United States who descended from immigrants from the Far East.
Native American ethnic group. The term was used to denote the concept of Americans living in the United States who descended from those people who were residing on the North American continent at the time of European discovery.

Multi-ethnic/cultural education. The term described "... the educational process that fosters the understanding and appreciation of the diverse cultural and ethnic heritages unique to a pluralistic society" (Iowa DPI, 1975b, p. 5).

Approval areas. The term referred to special areas of preparation which required specific courses designed to prepare teachers for working with atypical children in a tutorial or small group setting. Completion of the required courses resulted in an endorsement number attached to the elementary certificate.

Educational attainment. The statement referred to the highest level of formal schooling completed.

Occupation. The term referred to the task at which a parent was primarily engaged.

Homemaker. The term referred to those who were not gainfully employed outside the home and who devoted full time to the care of the family.

Concept. The term, after Osgood et al. (1957), was used to denote the ethnic groups which served as stimuli for which subjects rated bipolar adjectives on the Semantic Differential instrument.
Scale. Each scale of the Semantic Differential instrument was a bipolar adjective pair for which subjects assigned a rating.
CHAPTER II. REVIEW OF THE LITERATURE

Introduction

In the 1960's, minority groups focused attention on their differences and the desire for ethnic cultural maintenance within American society. Very little research has been conducted to illustrate the effects of a curriculum patterned after the value system and learning style typical of the White, Anglo-American culture.

The Coleman Report (1966), however, created an awareness for the need to reexamine traditional curriculum. Findings revealed that children, within the total population, who were from homes maintaining strong cultural identity with minority ethnic groups were not benefiting fully from their educational opportunities. This led to substantial federal funding and educators, with varying levels of expertise, responded. Solutions were sometimes speculative, relying on personal experience or observations. Little writing has been supported by research, though there has been a recognized need for longitudinal studies (Abrahams, 1971; Broudy, 1975; Cole and Hall, 1974; Etzioni, 1971; Margolin, 1974; Pierce, 1975; Rivlin, 1975; Young and Brees, 1975).

Inhibiting factors for interpretation of the literature have been caused by disagreement over causal relationships, definition of terms, and generalizations based on different
Ethnic groups and on discrete areas of the country. Questions regarding establishment of a working definition of terms and determination of goals and scope of a multicultural approach to curriculum remain unresolved.

For example, writing from the 1960's referred to a child from an ethnic minority as a "disadvantaged child." While such a child was probably at a disadvantage, due to the fact that his early learning style and experiential background was different from that of school officials and curricular patterns, disadvantaged is manifested in various ways. The term was considered by many to be inappropriate. "Culturally disadvantaged" was substituted but soon recognized as implying inferiority, hence many authors began referring to the "culturally different" child (Faunce, 1968).

Confusion over terms used to describe specific ethnic groups also presents problems for the researcher. One group has been labeled "Negro," "Afro-American," and "Black." Another group has been referred to as "Anglo-American," "English-speaking," and "White." Still another was called "Latin-American," "Mexican-American," "Spanish-surname," and, as a result of the La Raza movement, "Chicano," though in some parts of the country ethnic group members reject identity with each term. "Hispanic-American" has become more commonly accepted but the controversy continues (Goodyear, 1973).
Due to lack of agreement regarding terminology, degree and description of needed emphasis, and of empirical evidence to support proposed solutions, the present study relied upon writers in the field who have expressed opinions regarding curricular change and teacher characteristics they considered to be those required for successful implementation of a multicultural curriculum. Those studies dealing with relationships between biographical characteristics of teachers and their effectiveness with children from minority cultures and those dealing with ethnic stereotypes held by teachers and college students were cited.

This chapter presents a general review of the literature in four areas of significance to the study. They are: an examination of the relationship between ethnicity and multicultural education, societal pressures affecting cultural context of curriculum, teacher characteristics considered to be desirable for successful implementation of a multicultural curriculum, and research dealing with ethnic stereotypes held by teachers and college students.

**Relationship between Ethnicity and Multicultural Education**

Ethnicity, as it exists in the pluralistic society, and implications for multicultural education are described as interpreted by writers in the field.
Definition of ethnicity and culture

The United States was founded by diverse groups of people who formed a government and a way of life which incorporated strengths from many cultures and races. Therefore, ethnicity has always been synonymous with American Society. The nature of the society required that a philosophy emerge which recognized that:

1) ethnic differences cannot be ignored;
2) ethnic identity is a part of personal identity;
3) ethnic differences must be talked about; and
4) exploration of one's heritage and culture should be part of formal learning (Leon, 1976, p. 64).

Baker (1976) describes an ethnic group as a race of people who share historical, economic, political, social, and psychological involvement. Culture is a more global concept which may, in special cases, cross ethnic lines. Women, youth, or those residing in particular geographical areas of a country, for example, are sometimes referred to as culture groups though they may not share ethnic identity. Such a designation implies shared discrete characteristics, within the total social system, which are common to the group. However, in the strictest sense, culture is closely associated with ethnicity and includes the mores and customs of a group of people. Most anthropolists agree that multiculturalism cannot be analyzed or defined without the inclusion of ethnicity (Baker, 1976; Beals and Hoijer, 1959).
Ethnic/culture groups want to retain the ethos, the religion and custom-based traits of their forefathers. Their efforts do not detract from the culture of those with whom they live in the larger community but contribute to it in a functionally effective way (Margolin, 1974).

A trait is considered to be the smallest unit of culture and may consist of behavior patterns or artifacts. Each culture is comprised of many traits copied from other groups as well as those that originate from within the group. Each trait of a culture has four common characteristics: form, use, function, and meaning (Beals and Hoijer, 1959).

Cultural pluralism in United States society

Distinct ethnic groups realize the value of their heritage and take pride in its preservation. Some have formed enclaves and hold tenaciously to old-world ways. Scott (1976) declared,

> It is important to the future of this country that the concept of ethnicity continue; a sharing of traditions and customs will strengthen our social fabric. However, ethnicity must be tempered in both school and society so as to support the positive aspects of each culture and encourage all groups to share in the richness of other cultures (Scott, 1976, pp. 136-137).

A basic reality in the United States has been socio-economic stratification of society. Tendencies of ethnic groups to form enclaves has compounded the problem for ethnicity has become one of the criteria that has affected
the distribution of life chances for income security and full participation in the total society. Cultural diversity, if misinterpreted, could encourage separatism rather than pluralism when uniqueness of a specific group neglects the intercultural and intracultural relationships of the total society. Such cultural isolation can result in illiteracy and ignorance (Dentler, 1976; Grant, 1975; Rustin, 1975).

The United States needs to avoid both separatist or assimilated society but should strive to develop one which would be truly open, with individual pride in one's own cultural heritage and mutual respect for others. Rivlin describes a multicultural society as one in which

... the different ethnic cultures live in a symbiotic relationship, each enriching the other. In a truly multicultural society, the members of all ethnic groups, regardless of color, nationality, religion, sex, and relative numerical strength, share in the responsibility for developing productive ways of working together (Rivlin, 1975, p. 121).

Hunter (1973) states, "The American people are greater in their combination than as the mere sum of their individual parts. They constitute a unique whole in their combinations, interactions, interrelations, and cohesiveness" (Hunter, 1973, p. 262).
Societal Expectations for Cultural Influence in Curriculum

Trends in multicultural education

The nation's schools have historically been expected to provide education for citizenship, for economic growth, and to fulfill a variety of social and political functions. More than any other institution, the schools have provided the basis for national unity. They were the vehicle by which the millions of immigrants to the United States were "Americanized" and have led in recent efforts to provide equal opportunities for all citizens. Though there has sometimes been a gap between expectation and performance, society has deliberately used schools and colleges as agents of social change. National Assessment of Educational Progress (NAEP, 1973) revealed, however, that significant numbers of pupils from minority groups were not benefiting fully from their school experience. A shift in emphasis was indicated. The goal is being modified from "Americanization" of the populace to the adoption of a philosophy which embraces cultural pluralism through multicultural education. Public schools are the natural meeting place of diverse cultures and this places them in a position to become a key instrument for affecting social change (Pierce, 1975; Grant, 1975).

An initial requirement for the implementation of a multicultural curriculum is knowledge and acceptance of the
concept of cultural pluralism. School personnel need to recognize that to be different connotes neither superiority nor inferiority (Tanner, 1975). Multicultural education implies that:

Schools should be oriented toward the cultural enrichment of all children and youth through programs rooted to the preservation of cultural alternatives (AACTE, 1973, p. 264).

As curriculum developers work toward the implementation of multicultural curriculum, caution should be exercised to preserve the integrity of the program. There has been an assumption, on the part of some, that ethnic studies are additive with existent curriculum retained in tact. The imposition of short-term studies of minority group heritage and customs, on an already over-crowded curriculum, can result in superficial treatment and the formation of misconceptions (Banks, 1976).

Deloria (1970) observes that many ethnic studies programs emphasize the "sweetness and light" approach. Within this framework are two basic interpretations. First is the cameo approach to American history in which each minority group is depicted as playing an important role in national development at certain points in time. Such an approach has been spotty, disjointed, and unrealistic. The second approach deals with contributions each group had made to the American way of life. Such a curriculum tends to concentrate on visible cultural characteristics such as foods and music. He
noted that,

Under present conceptions of ethnic studies there can be no lasting benefit either to minority groups or to society at large. The pride that can be built into children and youth by acknowledgement of the validity of their group certainly cannot be built by simply transferring symbols and interpretations arising in white cultural history into an Indian, black, or Mexican setting (Deloria, 1970, p. 42).

Legislation for multicultural education

Legislation, in the 1960's and 1970's reflected a movement toward the realization of multicultural education. Government at the national, state, and local levels responded to societal pressures for reform and schools were considered primary vehicles for affecting change.

The National Elementary and Secondary Act (ESEA) Title VII (The Bilingual Education Act) in 1968 provided momentum for ethnic groups which had maintained language other than English in the home. The law provided that children considered to be non-English speakers had the right to be taught in their native language while also receiving English language instruction. By 1973 there were approximately 400 bilingual programs operating in 36 states, the District of Columbia, Guam, Puerto Rico, the Trust Territories, and the Virgin Islands. The programs were supported from federal, state, local, and private sources (Travieso, 1975; Brisk, 1976).
In the fall of 1975 Federal HEW (Health, Education, and Welfare) officials announced that grants totaling $1.8 million had been funded for forty-nine Ethnic Heritage Studies projects across the country. The program was provided under Title IX of the Elementary and Secondary Education Act and was intended to help promote greater appreciation of the nation's multi-ethnic society (Rosenberg, 1976).

Marconnit (1968) investigated the ways in which state legislatures had influenced curriculum in terms of courses, courses of study, courses of instruction, and special topics up through April, 1966. Sources of his data were not specifically identified. A follow-up study reviewed changes in legislative action for curriculum from the time of the Marconnit study up to 1974. Sources were the annotated statutes collection and the individual legislative session summaries for each state maintained by the Law Library of Louisiana. Among five new topics appearing most often were additions related to bilingual programs and to the role of minorities (Duet, Newfield, and Fluit, 1976).

An example of such legislation is a statute enacted by the California legislature in 1966. It stated that every school district which had one or more schools with 25% or more minority enrollment had to provide its professional staff with inservice preparation in the history, culture, and current problems of diverse ethnic groups (Education Code, Article 3.3, Section 13344.4). In 1974 the code was further
amended to include specific curricular provision of the role and contributions of persons of Oriental extraction (Blaylock, 1976; Duet et al., 1976).

The Illinois legislature enacted a similar statute (Public-Act 87-727) which mandated all schools, with twenty or more students whose first language was not English, to be instructed in basic skills using the language of the home for the first three years of public education with English language instruction as part of the daily curriculum. Local districts were to fund the program with the state assisting on a prorated basis. An additional section provided for curricular inclusion of the role and contributions of American Negroes and other ethnic groups (Steiner, 1974; Duet et al., 1976).

In July of 1975 the Iowa Department of Public Instruction published a statement, Guidelines for Achieving a Multi-Cultural, Sex Bias Free, Curriculum in Iowa Schools, in which a policy statement was made for compliance with the Iowa Code. The section of the code applicable to the present study was 257.25(3):

The following areas shall be taught in grades one through six: Social Studies, including geography, the history of the United States and Iowa shall be taught with attention given to the role in history played by all persons, and a positive effort shall be made to reflect the achievements of women, minorities, and any others, who in the past may have been overlooked by reason of race, religion, physical disability, or ethnic background (Iowa DPI, 1975b, p. 1).
Additional states enacting similar legislation between 1966 and 1974 include; Colorado, Nebraska, New Jersey, Oregon, South Dakota, and Texas (Duet et al., 1976).

Teacher Characteristics for Multicultural Education

Since little empirical data regarding teacher characteristics needed for implementing a multicultural curriculum was available, statements of opinion from a number of educators were included for the present study.

Rodriguez, (1970) lists seven skills that he considers a successful teacher of bilingual Hispanic-American children should possess:

1. They must be well trained in academic subjects.
2. They must be "attitudinally adjusted" to working with bilingual, bicultural students from economically deprived environments.
3. They must be aware of the bilingual student's built-in language resources as a valuable asset in advancing his education and contributing to the public welfare.
4. They must possess and effective familiarization with the Spanish language.
5. They must have deep knowledge of the characteristics of economically deprived people and also of the cultural traits of the Spanish-speaking population, and be able to distinguish between the differences in the cultural strata.
6. They must be dedicated to establishing a sound school-community relations program.
7. They must project to their students an expectation level that will raise their visions for school success and that will cause high achievement efforts (Rodriguez, 1970, pp. 51-52).

Competency-based criteria used for certifying prospective teachers was reviewed and found to be based on global behavioral traits typical of well-educated, White, middle-socioeconomic class population. Sources for the investigation were not identified, but if the study was not situation specific, conclusions of the investigators could be considered valid. They suggest that teachers meeting the criteria might not necessarily have the knowledge and perspective to plan and evaluate appropriate learning experiences for minority children (Castillo and Cruz, 1974).

In an investigation comparing values and attitudes of Black teachers with White teachers using the Rokeach Value Survey, it was concluded that Black teachers, as a group, have a more positive profile than White teachers in their aspiration toward traditional American ideals. All members of the sample were from inner-city or metropolitan schools. It may be incorrect, then, to assume that ethnic origin of teachers has a significant bearing on attitudes toward middle-class values. Other characteristics of teachers may be more influential for meeting the goals of multicultural curriculum (Sikula and Lemlech, 1976).
Teachers cannot realistically become culture free but should try to avoid generalizing to the group when working with culturally different children. Children are sensitive to the facades of adults who try to conceal real feelings and who make polite social responses. They reflect the negative attitudes of others and this can result in damaged self-concept. There is a high correlation between self-concept and cognitive development; therefore, the attitude of the teacher toward the culturally different child is important to educational attainment (Margolin, 1974; Trowbridge, 1972a,b; Carter, 1970; Ploghoft and Shuster, 1976).

Teachers who appreciate differences find less to censure, tend to understand cultural differences, and seek ways to individualize instruction. Such teachers are believed to be less inclined to judge who is, and who is not, capable of learning and to distribute time and attention more appropriately. The effective teacher in a multicultural classroom avoids using personal background as the standard for assessing behavior and abilities of others (Margolin, 1976; Zintz, Ulibarri, and Gonzalez, 1971; Dentler, 1976).

The concepts teachers have of human potential greatly effect the way that they work with children. Teacher awareness and appreciation of various cultures, and the ability to plan appropriate learning experiences does not imply that the teacher needs to know the culture as well as group members
Ploghoft and Shuster, 1976; Margolin, 1974; Rosenthal and Jacobson, 1968).

The child's culture should be protected, respected, and encouraged. Learning styles are guided by individual predisposition to behave in a particular way which evolves through cultural, ethnic, or racial origins. If teachers are informed about these characteristics as well as about curricular content, the classroom experience becomes more meaningful for the child (Margolin, 1974). It is important, therefore, for teachers to become knowledgeable about diverse cultures which will be represented in the classroom. Behavior can be evaluated accurately only in light of its meaning to those who practice it, to the relation of the behavior to other traits within the culture, and to the ways in which it assists in adaptation to environment or to others (Brown, 1963).

Teachers must understand the culture and value system of students and avoid imposing another. Etzioni (1971) states, "No society could function if all its members acted selfishly as those who seek to maximize their freedoms, disregarding the costs such maximization imposes on others" (Etzioni, 1971, p. 96).

Trowbridge noted that teachers often want to teach disadvantaged minority children for the wrong reasons. They strive to gain self-satisfaction by sacrificing themselves for
those less fortunate. Such teachers smother students with sympathy and are permissive, thus further damaging self-esteem and self-concept (Trowbridge, 1972a,b).

**Ethnic Stereotypes Held by Students and Teachers**

Dentler (1976) asserts that teachers share attitudes of White working and middle class parents who tend to generalize about culturally different children. Noll and Noll (1963), however, found that it is,

**... no longer correct to generalize that teachers are predominantly white-collar, middle-class in origin. Rather they represent in substantial members all but the extremes at the upper and lower ends of the socioeconomic range. Moreover, available evidence indicates that in urban centers the younger teachers include relatively more children of professional men and an even greater proportion coming from homes supported by manual labor (Noll and Noll, 1963, p. 109).**

They used the Allport, Vernon, Lindzey Study of Values (AVL) and the Minnesota Teacher Attitude Inventory, accompanied by a questionnaire to determine family background of subjects who were undergraduate education students. Few reliable differences were found in attitudes and values. Those differences that did appear on the AVL did not reveal any consistent trends or relationships to socio-economic class (Noll and Noll, 1963).

Jensen and Rosenfeld (1973) video taped 5th and 6th grade Anglo, Black, and Chicano middle and lower class students and video tapes were viewed by 156 teachers who rated them on
fifteen factors using the Semantic Differential technique. Of the teachers rating students, 49 were male, 107 were female; 131 teachers were Anglos, 13 were Chicano, and 6 were of other ethnic groups. The average age was from 30 to 39 years and the average teaching experience of the group was 9.08 years.

It was found that Anglo students were rated most positively, next were Black students, and Chicano students were rated least positively. Middle-class Anglo and Black students were rated more positively than those from lower socio-economic classes but, for Chicano students, class made no difference. It was concluded that teachers devalue Black and Chicano students in line with the teacher's ethnic stereotypes (Jensen and Rosenfeld, 1973).

Experiences of elementary school teachers following school desegregation were investigated using the Semantic Differential technique and a questionnaire. Perceptions of particular ethnic groups by teachers were measured by eighteen scale factors. There were no differences found between teachers with three or more Mexican-American or Black students, and teachers with fewer than three minority students (Purl and Curtis, 1970).

Teachers who maintained a single discipline standard for all ethnic groups reported fewer problems with pupils. A higher proportion of teachers reporting greater numbers of
discipline problems favored major curriculum revision. Most teachers who did not favor integration of Mexican-American students also did not favor integration of Black students. Teachers who did favor integration reported different experiences with ethnic minorities than those who did not favor it. No single item on the instrument accounted for the difference (Purl and Curtis, 1970).

Experienced teachers were found to have essentially the same perceptions of parent groups as teachers with little experience and both appeared to face the same problems. Findings did reveal that there were significant differences in perceptions of all teachers regarding various ethnic groups of parents. Anglos were viewed as the most powerful in the community and Mexican-Americans as the least powerful. Blacks were perceived as most interested in assimilation with other groups while Mexican-Americans were viewed as least interested. Anglos were perceived as having the highest aspirations for their children and Mexican-Americans as having the lowest. Mexican-Americans were perceived as making fewest demands on the school, with Anglos making the greatest, and Blacks rated very close to the Anglo group (Purl and Curtis, 1970).

A survey of parents disclosed that the majority felt that the schools had acquiesced to the demands of the minority child, while the minority group felt that the schools had not met their needs (Purl and Curtis, 1970).
Attitudes of teachers toward culturally disadvantaged children in the Minneapolis, Minnesota Public Schools were studied using a preliminary questionnaire to draw a stratified sample for further comparisons. Tabulation of the questionnaire for the total sample revealed that approximately two-thirds of the 775 teachers contacted completed the instrument. Of those 86 per cent were female, 96 per cent were White, 56 per cent were married, and 91 per cent had been reared in the Midwest. Sixteen per cent held advanced degrees, two per cent did not hold degrees, and over one third had earned degrees during the five years prior to the study. Approximately one half had earned degrees at the University of Minnesota (Faunce, 1968).

Nine of ten were from upper-middle or lower-middle class backgrounds, with seven per cent from the lower-class and three per cent reporting that their fathers had been unskilled laborers (Faunce, 1968).

One half claimed little experience with disadvantaged children although the typical teacher had more than 13 years experience with an average of 5 years teaching disadvantaged children. One of three reported they had practically no disadvantaged children in the classroom while one of five reported that the majority of their students were disadvantaged. Ninety-one per cent considered they had not received adequate training for teaching disadvantaged children. Fewer than one
half had read one or more books on a list of six which dealt with teaching strategies for disadvantaged children (Faunce, 1968).

Most claimed that the child's cultural background made little difference to them personally, but thirty-one per cent stated a preference for teaching those who were not disadvantaged or culturally different. One-fifth (21%) preferred to work with disadvantaged children (Faunce, 1968).

The Minnesota Teacher Attitude Inventory (MTAI) was administered to a stratified sample group. This group was composed of 200 teachers considered to be effective and 100 considered to be ineffective working with culturally disadvantaged children. Black teachers and those from lower socio-economic backgrounds tended to be evaluated as more effective than White middle and upper-income teachers. Background variables were correlated with attitudes toward children, but relationships were found to be slight (Faunce, 1968).

Evaluation of teacher effectiveness was slightly higher for those who ranked in the upper range of their high school class and for those who scored high on the MTAI. Teachers who scored high on the HY scale of the MTAI tended to be considered less effective teachers. The investigator speculated that this was due to a denial of the problem (Faunce, 1968).
In a similar survey, four years later in the Minneapolis Public Schools, teachers were asked to respond to a questionnaire containing 186 items. Again responses were examined relative to evaluation of teachers. It was concluded that those rated as effective showed greater empathy, commitment to teaching, and had had more experience working with culturally different children. Those rated less effective tended to hold stereotypes about ethnic groups and ignored physical deprivation of low-income groups (Faunce, 1969).

Teachers of Mexican-American students in the Los Angeles public schools were administered two instruments; the Chicano Awareness Scale, a nineteen item Likert scale; and a simulation instrument which was an In-Basket sort using a set of current and past records of fictitious sixth graders. An inservice program was then executed for three hours per week for fifteen weeks. The major objective of the treatment program was to effect an awareness of the Mexican-American culture (Lopez and Piper, 1974).

Posttest scores indicated that sixth grade teachers and teachers in the age range of 20 to 29 years made the greatest gains, while teachers in the age range of 50 to 59 years made least gains. Males showed more awareness than females (Lopez and Piper, 1974).

Goodyear (1973) constructed a test to measure cultural empathy. Sixteen college students from three major ethnic
groups assisted in item construction. The test was 150 multiple choice items. Most were original with a few taken from the Dove Counterbalance I.Q. Test. The test was validated over four forms with over 200 students responding to the various forms of the test. Greatest empathy was indicated by the scores from the Chicano group with least indicated for the White group. The investigator speculated that the difference might have been due to the fact that Chicanos had functioned in a multicultural atmosphere longer and had absorbed more from other cultures than the Black or the White ethnic groups (Goodyear, 1973).

The Semantic Differential technique was employed with introductory psychology students from three universities to investigate connotative associations of color names and color names used to describe ethnic groups. Two sets of stimulus concepts were compared, color person and ethnic-national. Findings indicated that Caucasian subjects viewed each triad of color-code related concepts as belonging to the same meaning family, while Black subjects responded to the racial concepts in a different fashion. It was concluded that there should be a deliberate effort to reshape language habits so that groups of persons are not designated by color names (Williams, 1966).
Summary

Historically schools have functioned as a socializing agent and have traditionally attempted to fuse various ethnic cultures into a model American culture dominated by Anglo-American customs and values. In the 1960's, minority groups drew attention to inequities in traditional curriculum. Publication of the Coleman report (1966) supported these assertions and attracted the attention of the general public. Society responded by enacting legislation aimed at implementing and improving multicultural education programs in the schools.

Teachers were recognized as key implementers of curriculum reform and characteristics needed for working effectively in pluralistic classrooms were examined. Little empirical evidence has been reported to support many assertions though some studies have been conducted.

The present investigation was undertaken to examine ethnic stereotypes held by prospective elementary school teachers. It was considered that the resultant information would be useful for planning higher education programs which would improve preparation of teachers for their role in meeting the goals of multicultural education.
CHAPTER III. METHOD OF PROCEDURE

The purpose of the investigation was to identify ethnic stereotypes held by prospective elementary school teachers and to examine relationships between those stereotypes and selected background characteristics.

This chapter notes hypotheses to be tested and describes subjects, instrument construction, data collection procedures, data analysis techniques, assumptions, and delimitations. A flow chart depicting steps followed in the investigation can be found in Appendix A.

Hypotheses

The following hypotheses, derived from four major research questions, were tested:

Question 1.: Are ethnic stereotypes held by prospective elementary school teachers interrelated?

H_{01}: There is no significant difference in the relationships of stereotypes held by prospective elementary school teachers of the five ethnic groups as measured by the Semantic Differential technique.

Question 2.: Are there differences in ethnic stereotypes held by prospective elementary school teachers who are male and those who are female?

H_{02}: There is no significant difference in ethnic stereotypes held by prospective elementary teachers who are male and those who are female.
Question 3.: Are selected kinds of teaching assignment aspirations of prospective elementary teachers related to the ethnic stereotypes they hold?

\( H_{03a} \): There is no significant difference in ethnic stereotypes held by students who aspire to teach in the lower elementary grades and those who aspire to teach in the upper elementary grades.

\( H_{03b} \): There is no significant difference in ethnic stereotypes held by students who aspire to teach atypical children and those who aspire to teach in regular classrooms.

\( H_{03c} \): There is no significant difference in ethnic stereotypes held by students who expect to teach in Iowa and those who expect to teach outside the state.

\( H_{03d} \): There is no significant difference in ethnic stereotypes held by students who expect to teach in urban centers and those who expect to teach in the suburbs or rural communities.

Question 4.: Are ethnic stereotypes held by prospective elementary school teachers related to selected biographical characteristics?

\( H_{04a} \): There is no significant relationship between the educational attainment of the fathers of prospective elementary school teachers and the ethnic stereotypes they hold.

\( H_{04b} \): There is no significant relationship between the educational attainment of the mothers of prospective elementary school teachers and the ethnic stereotypes they hold.

\( H_{04c} \): There is no significant relationship between the occupation of the fathers of prospective elementary school teachers and the ethnic stereotypes they hold.

\( H_{04d} \): There is no significant relationship between the occupation of the mothers of prospective elementary school teachers and the ethnic stereotypes they hold.
There is no significant relationship between size of home town in which prospective elementary school teachers were reared and the ethnic stereotypes they hold.

There is no significant difference in ethnic stereotypes held by prospective elementary school teachers who have always lived in Iowa and those who have lived at least five years outside the state.

Description of Sample

The investigation was conducted with students, majoring in elementary education, at five colleges and universities, in the state of Iowa, during the spring of 1976. Subjects were limited to those classified as juniors or seniors since they would be most likely to complete the degree program and enter the teaching profession.

The five teacher education institutions from which the sample was drawn were chosen for their diverse missions and philosophies. Clarke College in Dubuque, Iowa, a Roman Catholic liberal arts institution, had traditionally served only women students. Drake University in Des Moines, Iowa is a private professional institution. Iowa State University in Ames, Iowa, a Land Grant institution, is governed by the Iowa State Board of Regents. The University of Northern Iowa, also governed by the Iowa State Board of Regents, was formerly a teacher's college. Though it was granted university status in 1967, the primary focus continues to be teacher education. The Wartburg located in Waverly, Iowa, a coeducational liberal
arts college, is sponsored by the American Luthern Church.
It was considered that students enrolled at the five institutions presented a representative sample of prospective elementary school teachers.

The instrument was administered to classroom groups with absentees limiting the number of subjects. From 243 responses, sixteen were eliminated because they were not classified as juniors or seniors, thus there was a total of 227 in the sample. Table 1 presents per cent of respondents. Information was incomplete for some parts of the instrument, therefore the number of subjects included in separate data analysis varied slightly.

Table 1. Per cent of respondents by institutions

<table>
<thead>
<tr>
<th>Institution</th>
<th>Students on role</th>
<th>Respondents</th>
<th>% Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarke</td>
<td>50</td>
<td>42</td>
<td>84</td>
</tr>
<tr>
<td>Drake</td>
<td>44</td>
<td>37</td>
<td>84.3</td>
</tr>
<tr>
<td>I.S.U.</td>
<td>68</td>
<td>55</td>
<td>81</td>
</tr>
<tr>
<td>U.N.I.</td>
<td>87</td>
<td>84</td>
<td>96.5</td>
</tr>
<tr>
<td>Wartburg</td>
<td>25</td>
<td>25</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>274</strong></td>
<td><strong>243</strong></td>
<td><strong>88.6</strong></td>
</tr>
</tbody>
</table>
From the total sample, 222 identified themselves with the White ethnic group, one with the Black ethnic group, three with the Hispanic-American group, one did not mark the question, and there were none who marked Asian-American or Native American.

Instrumentation

Questionnaire construction

Literature dealing with questionnaire construction was consulted and a preliminary form prepared (Borg and Gall, 1971; Van Dalen, 1966).

Student identification numbers were requested in order to match responses to both sections of the instrument. Subjects were informed, however, that individual responses would remain confidential.

Enrollment figures from the Office of Career Planning and Placement at the University of Northern Iowa indicated that the number of men entering the field of elementary education has shown a steady increase in the last ten years. In order to compare responses by males and by females, an item for indicating sex was included.

Those who work with primary children must be concerned with initial transition from home to school, hence information regarding preparation for teaching lower elementary grades or upper elementary grades was included on the questionnaire.
Identification of certification approval areas was requested in order to isolate responses from those who expect to work with atypical children. Students who prepare in these specialized areas expect to work with children in small groups or in a tutorial setting.

Provision was made for indicating the setting (urban, suburban, or rural) in which the prospective teacher expected to pursue a position. Those who plan to teach in larger cities can expect to work with children from a greater variety of ethnic origins (Iowa DPI, 1975a).

The population composition of Iowa was predominantly White ethnic origin, therefore residence outside the state for at least five years was considered to have a bearing on ethnic stereotypes held by preservice teachers. Information regarding mobility of residence was requested (Iowa DPI, 1975a).

Smaller communities tended to have few ethnic minority members, therefore information regarding size of home town was collected. A current Iowa road map was consulted for population groupings (Iowa DPI, 1975a).

Recognizing that stereotypic views are formed quite early and greatly influenced by home environment, information regarding educational attainment and occupations of parents was requested (Miel and Kiester, 1967).
Stereotyping test

The second section of the instrument was designed to identify ethnic stereotypes held by subjects using the Semantic Differential technique. The technique was a simple, practical, versatile instrument developed by Charles E. Osgood for the measurement of meaning (Osgood et al., 1957).

Any measurement device must be evaluated against the criteria of objectivity, validity and reliability, hence evidence was collected regarding these criteria for the Semantic Differential technique.

Analysis of Semantic Differential technique Osgood (1957) contended that the Semantic Differential was objective since the procedures for administering the technique were explicit and methods for scoring not subjective. He explained that semantic differentiation is "... the successive allocation of a concept to a point in the multidimensional semantic space by selection from among a set of given semantic alternatives" (Osgood et al., 1957, p. 30). The procedures for administering the technique eliminate investigator bias in arriving at the final index of meaning and insure objectivity (Osgood et al., 1957).

Osgood further considered face validity to be assumed. There was "... no reason to question the validity of the instrument on the basis of its correspondence with the results to be expected from common sense" (Osgood et al., 1957).
Construct validity was examined and it was concluded that the technique measured meaning or attitudes and did so in an interpretable fashion. When the evaluative dimension of the Semantic Differential was compared with scores on the Edward's Social Desirability variable, a high correlation was found and it was concluded that the two instruments could be regarded as reflecting similar judgmental processes, that both measured meaning, and that both were dimensions of meaningful human judgments (Moss, 1960; Remmers, 1963; Ford and Meisals, 1965).

The degree of certainty for marking choices was examined by Mehling (1959) using two ratings compared on a scattergram and it was found that the Semantic Differential did measure both direction and intensity of attitudes.

Osgood (1957) relied on Conversations with ethnolinguists to support his assumptions of bipolarity. They generally agreed that semantic opposition is common to most, if not all language systems. Research has shown bipolarity to be highly individualized though group average analysis is consistent with Osgood's assumption. Bipolarity tends to be specific to the concepts being considered. The concept under consideration restricts the perception and interpretation of the adjective pairs (Green and Goldfried, 1965; Triandis, 1960; Staats and Staats, 1959, Wiggins and Fishbein, 1969).

Osgood (1967) cited his study of voting behavior as evidence of predictive validity. During the 1952 national
election subjects who indicated they were uncertain about how they intended to vote were compared with those who were certain and their ultimate candidate choices were those with whom the correlations of factors on the Semantic Differential were high.

As the subject matures, semantic differentiation takes on new meaning. Research has demonstrated that concept meaning for young children was not as stable as for adults (Maltz, 1963).

A number of studies have been conducted which dealt with cultural differences and racial stereotypes using the Semantic Differential technique. There was agreement that a high correspondence exists across cultures, that different groups defined a semantic space with similar evaluative dimensions, and that scales which are factorially stable across concept classes are stereotypic in that they are least susceptible to either concept-class or subject group changes (Kumata and Schramm, 1956; Suci, 1960; Tanaka, Oyama, and Osgood, 1963).

Reliability studies using both internal consistency and test retest procedures demonstrated the technique measured meaning and attitudes consistently (Norman, 1959; Jenkins, Russell, and Suci, 1958). Osgood stated that:

The average errors of measurement of Semantic Differential scales are always less than a single scale unit . . . . This means that we can expect subjects on the average, to be accurate within a single unit of the scale, which for practical purposes is satisfactory (Osgood, Suci, Tannenbaum, 1957, p. 31).
The Semantic Differential, it was concluded, was generally accepted as a useful technique for the measurement of meaning and has been a vehicle for studying beliefs held by groups of people about themselves and of other groups. It has been shown to be a valid and reliable instrument for use in the present investigation.

**Design of stereotyping test**  The Semantic Differential technique relies on the nature of the research to dictate the selection of concepts and polar adjectives. For the present investigation the criterion for the selection of concepts was determined by the representation of each ethnic group in the United States school population. Enrollment for 1972 was identified by Samuel B. Ethridge (1973), director of Teacher Rights for the National Education Association. There were 35.5 million White Americans, 6.7 million Black Americans, 2.3 million Hispanic Americans, 333,000 Asian Americans, and 322,000 Native Americans. These five ethnic groups represented the five concepts for the study. They appeared in the order of magnitude of population in the instrument.

Selection of polar adjectives was based upon a study originating from the Third Session of the General Conference of UNESCO (United Nations Educational Scientific Cultural Organization) in which terms most often used by peoples of the world to describe each other were identified. The terms were previously used in a study of stereotypes of intergroup and
international groups held by ninth grade students in 1962. Terms selected were: practical-impractical, kind-cruel, intelligent-dumb, superior-inferior, happy-sad, clean-dirty, brave-cowardly, peaceloving-warlike, honest-dishonest, hard-working-lazy. These choices were considered to meet the criteria for selection described by Osgood (Klineberg, 1950; Snider, 1962; Osgood, Suci, and Tannenbaum, 1957).

Osgood (1957) states that attitudes predispose the subject toward evaluative responses. The first nine adjective pairs selected for the instrument had greatest loading on the evaluative dimension according to Osbood's Thesaurus listing. The last adjective pair, "hardworking-lazy," could not be located in the existing form though it was included because it was found on the UNESCO list of terms and had been used in a similar study of ethnic stereotypes. Therefore, the present study was restricted to the evaluative dimension of semantic space (Osgood, Suci, and Tannenbaum, 1957; Klineberg, 1950; Snider, 1962).

The Semantic Differential instrument utilized controlled association and a seven-point scale. Subjects were asked to evaluate five ethnic groups represented within the United States population against a set of ten adjectival scales and to indicate for each ethnic group the direction and intensity of the association. The numbers (0-6) were arbitrarily assigned to each step of the scale and a quantitative index of
the measure of meaning resulted.

Each concept (ethnic group) appeared on a separate page and instructions for marking the IBM answer sheet were repeated as each new concept was introduced in order to avoid the "halo" effect. Subjects were asked to indicate how they felt the particular concept could best be described by marking the number which corresponded to the choice along the scale. The verbal format for the scale selected was based on research suggesting that it was explicit and clearly understood by subjects. The need for clarity and simplicity was recognized since respondents would be given no verbal clarification (e.g., kind 0: 1: 2: 3: 4: 5: 6: cruel) extremely very fairly neutral fairly very extremely (Wells and Smith, 1960).

A table of random numbers was consulted and even numbers assigned to adjectives bearing a positive connotation and odd numbers to those bearing a negative connotation. Adjectives were then arranged in a random order with four of the ten pairs reversed to counteract response bias tendencies (Osgood, Suci, and Tannenbaum, 1967).

The instrument was composed of two parts, a questionnaire for the collection of selected background information and the other, a stereotyping test using the Semantic Differential technique. Responses to the complete instrument were marked on a single page of an IBM answer sheet in order that it could
be scanned and cards punched mechanically.

Written instructions, with examples showing procedures for marking answer sheets, preceded each section of the instrument thus eliminating the need for verbal assistance.

Pilot study

A group of students in Early Childhood Education at the University of Northern Iowa was selected as a pilot group. The teaching certificate pursued by these students included approval to teach in public school kindergarten. Since the certificate granted elementary education majors also included approval to teach in kindergarten, it was considered that the pilot group was similar to the group selected for the investigation.

The instrument was administered April 19, 1976 without verbal instructions. Between 20 minutes and 30 minutes were required to complete the instrument. Answer sheets were examined and modifications made. The major source of confusion centered on the terms assigned to ethnic groups. Respondents were unfamiliar with those terms which had currently appeared in the literature. Parentheses were added which contained qualifying statements using descriptions which had been in more common usage. Other refinements dealt with the order in which biographical data was included on the questionnaire in the first section. Revised instrument Appendix B.
Data Collection

Department heads and instructors of elementary methods courses at each of the five institutions were contacted and agreed to assist with administration of the instrument. Instruments, with complete instructions were distributed April 22, 1976 to four of the five institutions. The Wartburg was having spring recess, therefore instruments were mailed April 26, 1976. Letters of transmittal appear in Appendix C.

Completed instruments were returned to the investigator by the close of the spring term.

Internal consistency was measured, with data from the total sample, through the use of reliability coefficients using the standardized item alpha. With 227 subjects and 50 items on the stereotyping test, the data yielded alpha .69890 for a reliability coefficient and a standardized item alpha of .70922. The test was considered to be a sufficiently reliable instrument for the investigation.

With the Semantic Differential technique, a respondent's score on an item was the digit corresponding to the scale position marked. For purposes of analysis, factors which appeared in reverse order (negative pole to positive pole) on the answer sheet were reversed statistically so that a rank of 0 was always most positive, and a rank of 6 was most negative. Since there were 10 pairs of polar terms for each concept group, and since the smallest value possible for any pair was
0, the lowest score obtainable for any group was 0, the highest 60. For the total test the range was from 0 to 300.

The means and standard deviations were computed for the concepts. Means for each concept were derived by assigning values from 0 to 6 along the continuums, starting with 0 at the positive side each time. Therefore, the lower the mean, the more positive the stereotype. The system enabled the investigator to identify stereotypes of each of the five groups in order to make comparisons.

For the first major hypothesis, \( H_0^1 \), comparisons were made through intercorrelations of mean scores for the five concept groups using Pearson's Correlation Coefficients. For a comparison of ethnic stereotypes held by prospective elementary school teachers who were male and those who were female, \( H_0^2 \), t tests (two-tailed) were calculated for a difference of means for each ethnic group.

For the four subhypotheses: differences in ethnic stereotypes held by students preparing to teach upper and lower elementary grades, \( H_0^3_a \); preparing to teach atypical children and in regular classrooms, \( H_0^3_b \); expecting to teach in Iowa and expecting to teach outside the state, \( H_0^3_c \); expecting to teach in urban centers and expecting to teach in suburban or rural communities, \( H_0^3_d \); t tests (two-tailed) were calculated using the mean scores for each ethnic group and compared for each subhypothesis.
Subhypotheses $H_{0a}^4$, $H_{0b}^4$, and $H_{0c}^4$ were examined for significance using analysis of variance. In each case, a grand mean for each ethnic group stereotype was generated to serve as the dependent variable. For $H_{0a}^4$, independent variables were each of the mean scores for the groups identified by educational attainment of fathers. The ANOVA was repeated for each ethnic group. For $H_{0b}^4$, independent variables were each of the mean scores for groups identified by educational attainment of mothers. An ANOVA was calculated for each ethnic group. For $H_{0c}^4$, independent variables were each of the mean scores for groups identified by occupation of fathers with ANOVAs calculated for each ethnic group.

Comparisons of ethnic stereotypes and occupations of mothers, $H_{0d}^4$, were made through a series of $t$ tests (two-tailed). Because of the nature of role definition for mothers, differences in homemakers, who fill one major role in the family, and working mothers, who fill dual roles in the family, was considered to be greater than the interaction of the range of occupations. Therefore, separate sets of $t$ tests were computed comparing mean scores of ethnic stereotypes held by students whose mothers were homemakers with mean scores of each ethnic group held by each group identified by a gainful occupation.

For $H_{0e}^4$, the relationship between home town size and ethnic stereotypes, and $H_{0f}^4$, differences in ethnic stereo-
types held by those who have always lived in Iowa and those who have lived outside the state, the data were subjected to t tests (two-tailed) for a difference of means for each identified group with each ethnic group.

All tests in the investigation were examined for significance at or beyond the .05 level.

Basic Assumptions

The following assumptions have been made in the present investigation:

1. Subjects who participated in the investigation were representative of prospective elementary school teachers.

2. Interinstitutional variability of administration of the instrument was diminished through the use of written instructions.

3. Instructions were equally understood by subjects.

4. The test used in the investigation reflected ethnic stereotypes held by subjects.

5. Random reversal of positive adjectives on the scale reduced the "halo" effect for response choices.

6. The use of a separate page for each ethnic group on the stereotyping test reduced the tendency to compare response choices.

7. Biographical information selected for the study accurately reflected environmental influences on prospective elementary school teachers.
Delimitations

The present study was limited to elementary education students, in the state of Iowa, who were classified as juniors or seniors the spring term of 1976. In addition several other limitations existed:

1. The five institutions represented in the sample do not enroll equal numbers of students in elementary education.

2. The per cent of respondents varied among institutions.

3. Instruments were administered to classroom groups of students without random selection.

4. Instruments were administered during a four-week period rather than simultaneously.

5. Administration of instruments was conducted by several different persons.

Although the stated limitations reduce the generalization of results, the large number of students participating in the investigation diminishes, to some extent, the effect of these limitations.
CHAPTER IV. FINDINGS

The investigation was designed to identify ethnic stereotypes held by prospective elementary teachers and to compare results with selected background characteristics to determine if there were significant relationships.

To present relevant findings each research question and the hypothesis or subhypotheses are stated. Verbal and tabular presentation of the analysis of results follows the statement. A significance level at or beyond the .05 level was necessary for rejection of a hypothesis.

Question 1.: Are ethnic stereotypes held by prospective elementary school teachers interrelated?

\[ \text{H}_0: \text{There is no significant difference in the relationships of stereotypes held by prospective elementary school teachers of the five ethnic groups as measured by the Semantic Differential technique.} \]

Means and standard deviations of the total sample for each ethnic group derived from the stereotyping test are presented on Table 2. The matrix reporting the Pearson correlation coefficients between each paired concept group and the significance level of each, for the total sample, can be found on Table 3. S denotes probability of significance.

A significantly low correlation was found in the relationship between stereotypes held for the White ethnic group and
Table 2. Means and standard deviations of total sample for stereotyping test

<table>
<thead>
<tr>
<th>Concept group</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>227</td>
<td>3.0621</td>
<td>.3212</td>
</tr>
<tr>
<td>Black</td>
<td>227</td>
<td>3.1097</td>
<td>.3463</td>
</tr>
<tr>
<td>Hispanic-A.</td>
<td>227</td>
<td>3.0370</td>
<td>.3417</td>
</tr>
<tr>
<td>Asian-A.</td>
<td>227</td>
<td>2.0894</td>
<td>.3183</td>
</tr>
<tr>
<td>Native A.</td>
<td>227</td>
<td>3.0198</td>
<td>.3237</td>
</tr>
</tbody>
</table>

Table 3. Intercorrelations for the stereotyping test by the total sample

<table>
<thead>
<tr>
<th>Concept group</th>
<th>Black</th>
<th>Hispanic-American</th>
<th>Asian-American</th>
<th>Native American</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>.4338 (S=.001)</td>
<td>.3156 (S=.001)</td>
<td>.3744 (S=.001)</td>
<td>.0899* (S=.089)</td>
</tr>
<tr>
<td>Black</td>
<td>.6144 (S=.001)</td>
<td>.4494 (S=.001)</td>
<td>.2912 (S=.001)</td>
<td></td>
</tr>
<tr>
<td>Hispanic-A.</td>
<td>.4259 (S=.001)</td>
<td>.1666 (S=.006)</td>
<td>.3259 (S=.001)</td>
<td></td>
</tr>
<tr>
<td>Asian-A.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N = 227

The lower the mean score the more favorable the stereotype.

*Significance at the .05 level of probability.
the Native American ethnic group. All other ethnic groups were highly correlated, therefore, the investigation failed to reject $H_{01}$.

**Question 2.** Are there differences in ethnic stereotypes held by prospective elementary school teachers who are male and those who are female?

$H_{02}$: There is no significant difference in ethnic stereotypes held by prospective elementary teachers who are male and those who are female.

The data used in testing hypothesis 2 are presented in Table 4. The computed t value (two-tailed) using both pooled and separate t did not approach significance (.05 level); therefore, the investigation failed to reject $H_{02}$.

**Question 3.** Are selected kinds of teaching assignment aspirations of prospective elementary teachers related to the ethnic stereotypes they hold?

In order to test this relationship, four subhypotheses were subjected to individual analysis.

$H_{03a}$: There is no significant difference in ethnic stereotypes held by students who aspire to teach in the lower elementary grades and those who aspire to teach in the upper elementary grades.

The data used in testing subhypothesis 3a are presented in Table 5. The computed t value (two-tailed) using both pooled and separate t did not approach the .05 level of
Table 4. \( t \) test of data for ethnic stereotypes held by males and by females

<table>
<thead>
<tr>
<th>Stimulus concept</th>
<th>Respondent group</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Pooled ( t ) value</th>
<th>Separate ( t ) value</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Male</td>
<td>22</td>
<td>3.155</td>
<td>.329</td>
<td>1.44</td>
<td>1.44</td>
</tr>
<tr>
<td>White</td>
<td>Female</td>
<td>204</td>
<td>3.051</td>
<td>.320</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>Male</td>
<td>22</td>
<td>3.168</td>
<td>.312</td>
<td>.83</td>
<td>.91</td>
</tr>
<tr>
<td>Black</td>
<td>Female</td>
<td>204</td>
<td>3.103</td>
<td>.351</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>Male</td>
<td>22</td>
<td>3.055</td>
<td>.329</td>
<td>.25</td>
<td>.26</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Female</td>
<td>204</td>
<td>3.035</td>
<td>.345</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>Male</td>
<td>22</td>
<td>3.055</td>
<td>.356</td>
<td>1.01</td>
<td>.91</td>
</tr>
<tr>
<td>Asian</td>
<td>Female</td>
<td>204</td>
<td>2.982</td>
<td>.315</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native A.</td>
<td>Male</td>
<td>22</td>
<td>3.000</td>
<td>.247</td>
<td>.34</td>
<td>.43</td>
</tr>
<tr>
<td>Native A.</td>
<td>Female</td>
<td>204</td>
<td>3.024</td>
<td>.330</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( t \) (two-tailed) evaluated against .05 must be > 1.96
Table 5. *t* test of data for ethnic stereotypes held by aspirants for teaching upper elementary grades and aspirants for teaching lower elementary grades

<table>
<thead>
<tr>
<th>Stimulus concept</th>
<th>Respondent group</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Pooled <em>t</em> value</th>
<th>Separate <em>t</em> value</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Upper el.</td>
<td>58</td>
<td>3.055</td>
<td>.352</td>
<td>.20</td>
<td>.19</td>
</tr>
<tr>
<td>White</td>
<td>Lower el.</td>
<td>153</td>
<td>3.065</td>
<td>.321</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>Upper el.</td>
<td>58</td>
<td>3.134</td>
<td>.419</td>
<td>.46</td>
<td>.686</td>
</tr>
<tr>
<td>Black</td>
<td>Lower el.</td>
<td>153</td>
<td>3.110</td>
<td>.323</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>Upper el.</td>
<td>58</td>
<td>3.083</td>
<td>.410</td>
<td>.87</td>
<td>.76</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Lower el.</td>
<td>153</td>
<td>3.038</td>
<td>.299</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>Upper el.</td>
<td>58</td>
<td>3.029</td>
<td>.417</td>
<td>1.09</td>
<td>.90</td>
</tr>
<tr>
<td>Asian</td>
<td>Lower el.</td>
<td>153</td>
<td>2.976</td>
<td>.264</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native A.</td>
<td>Upper el.</td>
<td>58</td>
<td>3.059</td>
<td>.386</td>
<td>.80</td>
<td>.71</td>
</tr>
<tr>
<td>Native A.</td>
<td>Lower el.</td>
<td>153</td>
<td>3.019</td>
<td>.293</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*t* (two-tailed) evaluated against .05 must be > 1.96
significance; therefore, the investigation failed to reject $H_{0_{3a}}$.

$H_{0_{3b}}$: There is no significant difference in ethnic stereotypes held by students who aspire to teach atypical children and those who aspire to teach in regular classrooms.

Elementary education students who pursue certification approval areas for special education or remedial reading were considered to aspire to teach atypical children.

The data used in testing Subhypothesis 3b are presented in Table 6. The computed $t$ value (two-tailed) using both pooled and separate $t$ did not approach significance; therefore, the investigation failed to reject Subhypothesis 3b at the .05 level of significance.

$H_{0_{3c}}$: There is no significant difference in ethnic stereotypes held by students who expect to teach in Iowa and those who expect to teach outside the state.

The data used in testing Subhypothesis 3c are presented in Table 7. The computed $t$ value (two-tailed), using both pooled and separate $t$, did not approach significance for four of the ethnic groups: White, Black, Hispanic-Americans, and Asian-Americans. The pooled $t$ with the two respondent groups was significant at the .05 level for the Native American ethnic group, though the data failed to reject using the separate $t$; thus the investigation failed to reject Subhypothesis 3c.
Table 6. \textit{t} test of data for ethnic stereotypes held by aspirants for teaching atypical children and aspirants for teaching in a regular classroom

<table>
<thead>
<tr>
<th>Stimulus concept</th>
<th>Respondent group</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Pooled \textit{t} value</th>
<th>Separate \textit{t} value</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Atypical</td>
<td>123</td>
<td>3.070</td>
<td>.319</td>
<td>.40</td>
<td>.40</td>
</tr>
<tr>
<td>White</td>
<td>Regular</td>
<td>104</td>
<td>3.053</td>
<td>.325</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>Atypical</td>
<td>123</td>
<td>3.123</td>
<td>.373</td>
<td>.62</td>
<td>.63</td>
</tr>
<tr>
<td>Black</td>
<td>Regular</td>
<td>104</td>
<td>3.094</td>
<td>.313</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>Atypical</td>
<td>123</td>
<td>3.035</td>
<td>.387</td>
<td>.10</td>
<td>.10</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Regular</td>
<td>104</td>
<td>3.039</td>
<td>.281</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>Atypical</td>
<td>123</td>
<td>2.965</td>
<td>.307</td>
<td>1.26</td>
<td>1.25</td>
</tr>
<tr>
<td>Asian</td>
<td>Regular</td>
<td>104</td>
<td>3.018</td>
<td>.331</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native A</td>
<td>Atypical</td>
<td>123</td>
<td>3.003</td>
<td>.313</td>
<td>.84</td>
<td>.83</td>
</tr>
<tr>
<td>Native A.</td>
<td>Regular</td>
<td>104</td>
<td>3.039</td>
<td>.337</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\textit{t} (two-tailed) evaluated against .05 must be > 1.96
Table 7. t test of data for ethnic stereotypes held by subjects who expect to teach in Iowa and those who expect to teach outside the state

<table>
<thead>
<tr>
<th>Stimulus concept</th>
<th>Respondent group</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Pooled t value</th>
<th>Separate t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>In Iowa</td>
<td>109</td>
<td>3.067</td>
<td>.314</td>
<td>.22</td>
<td>.22</td>
</tr>
<tr>
<td>White</td>
<td>Outside</td>
<td>118</td>
<td>3.058</td>
<td>.329</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>In Iowa</td>
<td>109</td>
<td>3.084</td>
<td>.359</td>
<td>1.06</td>
<td>1.06</td>
</tr>
<tr>
<td>Black</td>
<td>Outside</td>
<td>118</td>
<td>3.133</td>
<td>.359</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>In Iowa</td>
<td>109</td>
<td>3.016</td>
<td>.318</td>
<td>.91</td>
<td>.91</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Outside</td>
<td>118</td>
<td>3.057</td>
<td>.362</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>In Iowa</td>
<td>109</td>
<td>2.986</td>
<td>.301</td>
<td>.14</td>
<td>.15</td>
</tr>
<tr>
<td>Asian</td>
<td>Outside</td>
<td>118</td>
<td>2.992</td>
<td>.335</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native A.</td>
<td>In Iowa</td>
<td>109</td>
<td>2.976</td>
<td>.379</td>
<td>1.97*</td>
<td>1.94</td>
</tr>
<tr>
<td>Native A.</td>
<td>Outside</td>
<td>118</td>
<td>3.060</td>
<td>.258</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at P < 0.05 for the concept of Native American using pooled t value.

*Significant at P < 0.05 for the concept of Native American using pooled t value.

$t (two-tailed)$ evaluated against .05 must be $> 1.96$
Ho$_{3d}$: There is no significant difference in ethnic stereotypes held by students who expect to teach in urban centers and those who expect to teach in the suburbs or rural communities.

The data used in testing Subhypothesis 3d are presented in Table 8. The computed t value (two-tailed), using both pooled and separate t, did not approach significance at the .05 level; therefore, the investigation failed to reject Subhypothesis 3d.

Question 4.: Are ethnic stereotypes held by prospective elementary school teachers related to selected biographical characteristics?

In order to test this relationship, six subhypotheses were subjected to individual analysis.

Ho$_{4a}$: There is no significant relationship between the educational attainment of the fathers of prospective elementary school teachers and the ethnic stereotypes they hold.

An analysis of variance was computed for each concept group. F tests for significance were performed and the results of these data appear in Table 9. The complete ANOVA can be found on Tables 19, 20, 21, 22, and 23, Appendix D.

There was no significant difference at the .05 level in educational attainment of fathers of prospective elementary school teachers and the ethnic stereotypes they hold. The investigation failed to reject Subhypothesis 4a.
Table 8. *t* test of data for ethnic stereotypes held by subjects who expect to teach in urban centers and those expect to teach in the suburbs or rural communities

<table>
<thead>
<tr>
<th>Stimulus concept</th>
<th>Respondent group</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Pooled <em>t</em> value</th>
<th>Separate <em>t</em> value</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Urban</td>
<td>46</td>
<td>3.093</td>
<td>.373</td>
<td>.75</td>
<td>.67</td>
<td></td>
</tr>
<tr>
<td>White Sub./rural</td>
<td>179</td>
<td>3.054</td>
<td>.309</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black Urban</td>
<td>46</td>
<td>3.096</td>
<td>.378</td>
<td>.36</td>
<td>.33</td>
<td></td>
</tr>
<tr>
<td>Black Sub./rural</td>
<td>179</td>
<td>3.116</td>
<td>.340</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic Urban</td>
<td>46</td>
<td>3.013</td>
<td>.303</td>
<td>.55</td>
<td>.60</td>
<td></td>
</tr>
<tr>
<td>Hispanic Sub./rural</td>
<td>179</td>
<td>3.044</td>
<td>.353</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian Urban</td>
<td>46</td>
<td>3.020</td>
<td>.363</td>
<td>0.71</td>
<td>0.64</td>
<td></td>
</tr>
<tr>
<td>Asian Sub./rural</td>
<td>179</td>
<td>2.982</td>
<td>.308</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native A. Urban</td>
<td>46</td>
<td>3.070</td>
<td>.264</td>
<td>1.28</td>
<td>1.47</td>
<td></td>
</tr>
<tr>
<td>Native A. Sub./rural</td>
<td>179</td>
<td>3.002</td>
<td>.334</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*t* (two-tailed) evaluated against .05 must be > 1.96
Table 9. F tests of educational attainment of fathers and ethnic stereotypes

<table>
<thead>
<tr>
<th>Source</th>
<th>Sums of squares</th>
<th>Mean square</th>
<th>F-ratio</th>
<th>Significance of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>.309</td>
<td>.309</td>
<td>3.020</td>
<td>.080</td>
</tr>
<tr>
<td>Black</td>
<td>.386</td>
<td>.386</td>
<td>3.237</td>
<td>.070</td>
</tr>
<tr>
<td>Hispanic-A.</td>
<td>.259</td>
<td>.259</td>
<td>2.218</td>
<td>.134</td>
</tr>
<tr>
<td>Asian-A.</td>
<td>.143</td>
<td>.143</td>
<td>1.413</td>
<td>.234</td>
</tr>
<tr>
<td>Native A.</td>
<td>.042</td>
<td>.042</td>
<td>.398</td>
<td>.999</td>
</tr>
</tbody>
</table>

N = 225

\[ H_{0b} \]: There is no significant relationship between the educational attainment of the mothers of prospective elementary school teachers and the ethnic stereotypes they hold.

An analysis of variance was computed for each concept group. F tests for significance were performed and the results of these data appear in Table 10. The complete ANOVA can be found on Tables 24, 25, 26, 27, and 28, Appendix D.

Educational attainment of mothers and stereotypes held by prospective elementary school teachers for the White ethnic group was significant at the .05 level of probability. However, there was no significant difference found in the relationship between educational attainment of mothers and
Table 10. F tests of educational attainment of mothers and ethnic stereotypes

<table>
<thead>
<tr>
<th>Source</th>
<th>Sums of squares</th>
<th>Mean square</th>
<th>F-ratio</th>
<th>Significance of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>.402</td>
<td>.402</td>
<td>3.914</td>
<td>.046*</td>
</tr>
<tr>
<td>Black</td>
<td>.016</td>
<td>.016</td>
<td>.137</td>
<td>.999</td>
</tr>
<tr>
<td>Hispanic-A.</td>
<td>.032</td>
<td>.032</td>
<td>.276</td>
<td>.999</td>
</tr>
<tr>
<td>Asian-A.</td>
<td>.009</td>
<td>.009</td>
<td>.089</td>
<td>.999</td>
</tr>
<tr>
<td>Native A.</td>
<td>.005</td>
<td>.005</td>
<td>.052</td>
<td>.999</td>
</tr>
</tbody>
</table>

N = 223

*Significance at the .05 level of probability.

stereotypes held for the other ethnic groups, Black, Hispanic-American, Asian-American, or Native American. Therefore, the evidence failed to reject Subhypothesis 4b.

Ho⁴c: There is no significant relationship between the occupation of the fathers of prospective elementary school teachers and the ethnic stereotypes they hold.

An analysis of variance was computed for each concept group. F tests for significance were performed and the results of these data appear in Table 11. The complete ANOVA can be found in Tables 29, 30, 31, 32 and 33, Appendix D.
Table 11. F tests of occupation of fathers and ethnic stereotypes

<table>
<thead>
<tr>
<th>Source</th>
<th>Sums of squares</th>
<th>Mean square</th>
<th>F-ratio</th>
<th>Significance of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>1.137</td>
<td>.227</td>
<td>2.254</td>
<td>.050*</td>
</tr>
<tr>
<td>Black</td>
<td>.798</td>
<td>.160</td>
<td>1.380</td>
<td>.232</td>
</tr>
<tr>
<td>Hispanic-A.</td>
<td>.407</td>
<td>.081</td>
<td>.698</td>
<td>.999</td>
</tr>
<tr>
<td>Asian-A.</td>
<td>.316</td>
<td>.063</td>
<td>.660</td>
<td>.999</td>
</tr>
<tr>
<td>Native A.</td>
<td>.191</td>
<td>.038</td>
<td>.361</td>
<td>.999</td>
</tr>
</tbody>
</table>

N = 219

*Significance at the .05 level of probability.

Occupation of fathers and ethnic stereotypes held by prospective elementary school teachers for the White ethnic group was significant at the .05 level of probability. However, there was no significant difference found in the relationship between occupation of fathers and stereotypes held for the other ethnic groups, Black, Hispanic-American, Asian-American, or Native American. Therefore, the evidence failed to reject Subhypothesis 4c.

$H_{0,4d}^*$: There is no significant relationship between the occupation of the mothers of prospective elementary school teachers and the ethnic stereotypes they hold.
The largest single group in terms of occupation of mothers was the group whose mothers were homemakers. A series of t tests for a difference of means was performed comparing ethnic stereotypes held by those whose mothers were homemakers with each of the other occupations cited.

The data used in testing Subhypothesis 4d are presented in Tables 12, 13, 14, 15, and 16. The computed t value (two-tailed), using both pooled and separate t, did not approach significance for any of the comparison groups; therefore, the investigation failed to reject Subhypothesis 4d at the .05 level.

$H_{04d}: \text{There is no significant relationship between size of home town in which prospective elementary school teachers were reared and the ethnic stereotypes they hold.}$

In the state of Iowa towns with a population of less than 5,000 have very few members belonging to ethnic minority groups. A series of t tests were performed comparing ethnic stereotypes of each concept group held by students from home towns with a population of 5,000 or less with stereotypes held by students from home towns with a population greater than 5,000.

The data used in testing Subhypothesis 4e are presented in Table 17. The computed t value (two-tailed), using both pooled and separate t, did not approach significance; therefore, the investigation failed to reject Subhypothesis 4e at
Table 12. t test of data for ethnic stereotypes held by subjects whose mothers were homemakers and those whose mothers were in a profession

<table>
<thead>
<tr>
<th>Stimulus concept</th>
<th>Respondent group</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Pooled t value</th>
<th>Separate t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Homemaker</td>
<td>96</td>
<td>3.043</td>
<td>.359</td>
<td>.43</td>
<td>.47</td>
</tr>
<tr>
<td>White</td>
<td>Profession</td>
<td>51</td>
<td>3.067</td>
<td>.250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>Homemaker</td>
<td>96</td>
<td>3.079</td>
<td>.316</td>
<td>.61</td>
<td>.66</td>
</tr>
<tr>
<td>Black</td>
<td>Profession</td>
<td>51</td>
<td>3.110</td>
<td>.240</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>Homemaker</td>
<td>96</td>
<td>3.010</td>
<td>.387</td>
<td>.03</td>
<td>.03</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Profession</td>
<td>51</td>
<td>3.012</td>
<td>.229</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>Homemaker</td>
<td>96</td>
<td>2.979</td>
<td>.297</td>
<td>.66</td>
<td>.70</td>
</tr>
<tr>
<td>Asian</td>
<td>Profession</td>
<td>51</td>
<td>2.947</td>
<td>.248</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native A.</td>
<td>Homemaker</td>
<td>96</td>
<td>3.031</td>
<td>.330</td>
<td>1.19</td>
<td>1.21</td>
</tr>
<tr>
<td>Native A.</td>
<td>Profession</td>
<td>51</td>
<td>2.965</td>
<td>.312</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

t (two-tailed) evaluated against .05 must be > 1.96
Table 13. t test of data for ethnic stereotypes held by subjects whose mothers were homemakers and those whose mothers were in a clerical occupation

<table>
<thead>
<tr>
<th>Stimulus concept</th>
<th>Respondent group</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Pooled t value</th>
<th>Separate t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Homemaker</td>
<td>96</td>
<td>3.043</td>
<td>.359</td>
<td>.61</td>
<td>.69</td>
</tr>
<tr>
<td>White</td>
<td>Clerical</td>
<td>36</td>
<td>3.003</td>
<td>.271</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>Homemaker</td>
<td>96</td>
<td>3.079</td>
<td>.316</td>
<td>.40</td>
<td>.43</td>
</tr>
<tr>
<td>Black</td>
<td>Clerical</td>
<td>36</td>
<td>3.056</td>
<td>.263</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>Homemaker</td>
<td>96</td>
<td>3.010</td>
<td>.287</td>
<td>.30</td>
<td>.26</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Clerical</td>
<td>36</td>
<td>2.992</td>
<td>.389</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>Homemaker</td>
<td>96</td>
<td>2.979</td>
<td>.297</td>
<td>.48</td>
<td>.44</td>
</tr>
<tr>
<td>Asian</td>
<td>Clerical</td>
<td>36</td>
<td>2.950</td>
<td>.355</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native A.</td>
<td>Homemaker</td>
<td>96</td>
<td>3.031</td>
<td>.330</td>
<td>.67</td>
<td>.74</td>
</tr>
<tr>
<td>Native A.</td>
<td>Clerical</td>
<td>36</td>
<td>3.072</td>
<td>.264</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ t \text{ (two-tailed) evaluated against .05 must be > 1.96} \]
Table 14. \( t \) test of data for ethnic stereotypes held by subjects whose mothers were homemakers and those whose mothers were in a sales occupation

<table>
<thead>
<tr>
<th>Stimulus concept</th>
<th>Respondent group</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Pooled t value</th>
<th>Separate t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Homemaker</td>
<td>96</td>
<td>3.043</td>
<td>.359</td>
<td>1.92</td>
<td>1.80</td>
</tr>
<tr>
<td>White</td>
<td>Sales</td>
<td>5</td>
<td>3.360</td>
<td>.385</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>Homemaker</td>
<td>96</td>
<td>3.079</td>
<td>.316</td>
<td>.98</td>
<td>1.38</td>
</tr>
<tr>
<td>Black</td>
<td>Sales</td>
<td>5</td>
<td>3.220</td>
<td>.217</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>Homemaker</td>
<td>96</td>
<td>3.010</td>
<td>.287</td>
<td>.23</td>
<td>.34</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Sales</td>
<td>5</td>
<td>3.040</td>
<td>.182</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>Homemaker</td>
<td>96</td>
<td>2.979</td>
<td>.297</td>
<td>2.77</td>
<td>1.49</td>
</tr>
<tr>
<td>Asian</td>
<td>Sales</td>
<td>5</td>
<td>3.380</td>
<td>.597</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native A.</td>
<td>Homemaker</td>
<td>96</td>
<td>3.031</td>
<td>.330</td>
<td>1.25</td>
<td>1.32</td>
</tr>
<tr>
<td>Native A.</td>
<td>Sales</td>
<td>5</td>
<td>3.220</td>
<td>.311</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( t \) (two-tailed) evaluated against .05 must be > 1.96
Table 15. t test of data for ethnic stereotypes held by subjects whose mothers were homemakers and those whose mothers were in trade occupations

<table>
<thead>
<tr>
<th>Stimulus concept</th>
<th>Respondent group</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Pooled t value</th>
<th>Separate t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Homemaker</td>
<td>96</td>
<td>3.043</td>
<td>m .359</td>
<td>.73</td>
<td>1.02</td>
</tr>
<tr>
<td>White</td>
<td>Trades</td>
<td>4</td>
<td>3.175</td>
<td>m .250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>Homemaker</td>
<td>96</td>
<td>3.079</td>
<td>m .316</td>
<td>1.67</td>
<td>1.44</td>
</tr>
<tr>
<td>Black</td>
<td>Trades</td>
<td>4</td>
<td>3.350</td>
<td>m .370</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>Homemaker</td>
<td>96</td>
<td>3.010</td>
<td>m .287</td>
<td>1.24</td>
<td>.67</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Trades</td>
<td>4</td>
<td>3.200</td>
<td>m .560</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>Homemaker</td>
<td>96</td>
<td>2.979</td>
<td>m .297</td>
<td>.64</td>
<td>.83</td>
</tr>
<tr>
<td>Asian</td>
<td>Trades</td>
<td>4</td>
<td>3.075</td>
<td>m .222</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native A.</td>
<td>Homemaker</td>
<td>96</td>
<td>3.031</td>
<td>m .330</td>
<td>.78</td>
<td>.76</td>
</tr>
<tr>
<td>Native A.</td>
<td>Trades</td>
<td>4</td>
<td>2.900</td>
<td>m .337</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

t (two-tailed) evaluated against .05 must be > 1.96
Table 16. t test of data for ethnic stereotypes held by subjects whose mothers were homemakers and those whose mothers were identified in the category of "other"

<table>
<thead>
<tr>
<th>Stimulus concept</th>
<th>Respondent group</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Pooled t value</th>
<th>Separate t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Homemaker</td>
<td>96</td>
<td>3.043</td>
<td>.359</td>
<td>1.04</td>
<td>1.09</td>
</tr>
<tr>
<td>White</td>
<td>Other</td>
<td>29</td>
<td>3.121</td>
<td>.332</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>Homemaker</td>
<td>96</td>
<td>3.079</td>
<td>.316</td>
<td>.98</td>
<td>.77</td>
</tr>
<tr>
<td>Black</td>
<td>Other</td>
<td>29</td>
<td>3.155</td>
<td>.505</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>Homemaker</td>
<td>96</td>
<td>3.010</td>
<td>.287</td>
<td>1.67</td>
<td>1.32</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Other</td>
<td>29</td>
<td>3.128</td>
<td>.450</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>Homemaker</td>
<td>96</td>
<td>2.979</td>
<td>.297</td>
<td>.48</td>
<td>.45</td>
</tr>
<tr>
<td>Asian</td>
<td>Other</td>
<td>29</td>
<td>3.010</td>
<td>.335</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native A.</td>
<td>Homemaker</td>
<td>96</td>
<td>3.031</td>
<td>.330</td>
<td>.78</td>
<td>.75</td>
</tr>
<tr>
<td>Native A.</td>
<td>Other</td>
<td>29</td>
<td>2.976</td>
<td>.353</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( t \) (two-tailed) evaluated against .05 must be > 1.96
Table 17. t test of data for ethnic stereotypes held by subjects from home towns with a population of 5,000 or less and those with a population greater than 5,000

<table>
<thead>
<tr>
<th>Stimulus concept</th>
<th>Respondent group</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Pooled t value</th>
<th>Separate t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>&gt;5,000</td>
<td>84</td>
<td>3.090</td>
<td>.328</td>
<td>1.00</td>
<td>0.99</td>
</tr>
<tr>
<td>White</td>
<td>&lt;5,000</td>
<td>141</td>
<td>3.046</td>
<td>.320</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>&gt;5,000</td>
<td>84</td>
<td>3.118</td>
<td>.354</td>
<td>0.34</td>
<td>0.34</td>
</tr>
<tr>
<td>Black</td>
<td>&lt;5,000</td>
<td>141</td>
<td>3.101</td>
<td>.341</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>&gt;5,000</td>
<td>84</td>
<td>3.060</td>
<td>.391</td>
<td>0.78</td>
<td>0.74</td>
</tr>
<tr>
<td>Hispanic</td>
<td>&lt;5,000</td>
<td>141</td>
<td>3.023</td>
<td>.312</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>&gt;5,000</td>
<td>84</td>
<td>2.995</td>
<td>.332</td>
<td>0.40</td>
<td>0.39</td>
</tr>
<tr>
<td>Asian</td>
<td>&lt;5,000</td>
<td>141</td>
<td>2.978</td>
<td>.299</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native A.</td>
<td>&gt;5,000</td>
<td>84</td>
<td>3.049</td>
<td>.315</td>
<td>1.09</td>
<td>1.10</td>
</tr>
<tr>
<td>Native A.</td>
<td>&lt;5,000</td>
<td>141</td>
<td>3.000</td>
<td>.330</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* t (two-tailed) evaluated against .05 must be > 1.96*
the .05 level.

$\text{Ho}_{4f}$: There is no significant difference in ethnic stereotypes held by prospective elementary school teachers who have always lived in Iowa and those who have lived at least five years outside the state.

The data used in testing Subhypothesis 4f are presented in Table 18. The computed $t$ value (two-tailed), using both pooled and separate $t$, was not sufficient to reject the null hypothesis at the .05 level of significance.

Summary

Findings concerning relationships of ethnic stereotypes held by prospective elementary school teachers, differences in stereotypes held by males and by females, the relationship between ethnic stereotypes and teaching position aspirations, and the relationship between ethnic stereotype and selected biographical characteristics have been presented.

Means and standard deviations for the total sample group, and for each comparison group, were generated from the stereotyping test sof each ethnic group. These data were used for investigating relationships. Hypotheses and subhypotheses were tested for significance at the .05 level of probability.

To investigate the first research question, an intercorrelation matrix using Pearson's correlation coefficient, was employed to examine relationships of stereotypes held for the
Table 18. *t* test of data for ethnic stereotypes held by subjects who have always lived in Iowa and those who have lived outside the state at least 5 years

<table>
<thead>
<tr>
<th>Stimulus concept</th>
<th>Respondent group</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Pooled t value</th>
<th>Separate t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Always Ia.</td>
<td>155</td>
<td>3.081</td>
<td>0.336</td>
<td>0.87</td>
<td>0.94</td>
</tr>
<tr>
<td>White</td>
<td>Outside</td>
<td>64</td>
<td>3.039</td>
<td>0.281</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>Always Ia.</td>
<td>155</td>
<td>3.139</td>
<td>0.367</td>
<td>1.71</td>
<td>1.88</td>
</tr>
<tr>
<td>Black</td>
<td>Outside</td>
<td>64</td>
<td>3.052</td>
<td>0.289</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>Always Ia.</td>
<td>155</td>
<td>3.047</td>
<td>0.371</td>
<td>0.28</td>
<td>0.34</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Outside</td>
<td>64</td>
<td>3.033</td>
<td>0.237</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>Always Ia.</td>
<td>155</td>
<td>2.975</td>
<td>0.336</td>
<td>0.58</td>
<td>0.65</td>
</tr>
<tr>
<td>Asian</td>
<td>Outside</td>
<td>64</td>
<td>3.002</td>
<td>0.248</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native A.</td>
<td>Always Ia.</td>
<td>155</td>
<td>3.025</td>
<td>0.349</td>
<td>0.23</td>
<td>0.26</td>
</tr>
<tr>
<td>Native A.</td>
<td>Outside</td>
<td>64</td>
<td>3.014</td>
<td>0.253</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*t* (two-tailed) evaluated against .05 must be > 1.96
five ethnic groups. Means for the White and Native American ethnic groups were not highly correlated. Findings showed all other groups were highly interrelated.

For an examination of the second research question, separate t tests for difference of means for each response group, males and females, was applied to each of the five ethnic group stereotypes. No significant differences were found between comparison groups for stereotypes of any of the five ethnic groups.

Four subhypotheses were tested to investigate the third research question. Means for each ethnic group, generated by students who were preparing to teach lower elementary grades, and those preparing to teach upper elementary grades, were compared using separate t tests. There were no significant differences found between comparison groups for any ethnic groups.

A series of t tests for a difference of means were also applied to compare data from students who expect to teach in Iowa and those who expect to teach outside the state, testing each ethnic group stereotype separately. The data resulted in no significant differences between comparison groups for any ethnic groups.

Means for each ethnic group were generated for those expecting to teach in urban centers, and for those expecting to teach in the suburbs or rural communities. Separate t
tests were computed on these means. No significant differences were found between means of the two comparison groups for any ethnic group.

The fourth research question dealt with relationships between ethnic stereotypes and selected biographical characteristics. Six subhypotheses were tested.

To investigate relationships between educational attainment of fathers, and educational attainment of mothers, an analysis of variance was computed for each educational group on each ethnic group, using the grand means for each ethnic group as the dependent variables. F tests were examined for significance at the .05 level of probability.

F values for subjects, grouped by educational attainment level of fathers, were not significant for any ethnic group. There was, however, a significant relationship between educational attainment of mothers and stereotype held for the White ethnic group. F values did not approach significance for the other four ethnic groups.

Relationships between occupation of fathers and ethnic stereotypes were investigated by computing an analysis of variance using the grand mean for each ethnic group as the dependent variable and individual means for respondents from each occupation group as independent variables. F tests were compared for significance at the .05 level of probability. A significant relationship between father's occupation and
stereotype held for the White ethnic group was found. Relationships for other ethnic groups did not approach significance.

Relationships between occupations of mothers and ethnic stereotypes were examined through a series of t tests. A separate t test was calculated comparing the mean for those whose mothers were homemakers with those whose mothers were employed in each other occupation group, for each ethnic group. The data found no significant relationships for any of the comparisons.

A t test was calculated for each ethnic group comparing the means for those who were reared in communities with populations greater than 5,000 with those reared in communities with less than 5,000 population. There were no significant relationships found between size of home town and each ethnic group.

Means, from the stereotyping test for subjects who had always lived in Iowa, and for those who had lived outside the state, were compared using t tests. No significant relationship was found between ethnic stereotypes of each group and place of residence.
CHAPTER V. DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

The results of the present study indicate that only slight differences exist in the stereotypes that prospective elementary school teachers hold for each of the five ethnic groups: White, Black, Hispanic-American, Asian-American, and Native American. There was a high correlation between ethnic stereotypes held of all groups except for the White ethnic group and the Native American ethnic group. These two correlated significantly lower.

The investigation revealed that many more women than men are preparing to enter the elementary teaching profession but there was no significant difference in the ethnic stereotypes they hold. There were 204 females and only 22 males in the sample.

Since the likelihood of working with greater numbers of children belonging to ethnic minority groups is inherent in particular teaching assignments, the investigation examined relationships between professional aspirations and ethnic stereotypes.

The data revealed that a substantially greater number of students were preparing to work with lower elementary children
who are experiencing a transition between the culture between home and school. There were 153 respondents who indicated a preference for lower elementary teaching and 58 who indicated a preference for upper elementary teaching. When relationships between grade level assignment preference and ethnic stereotypes were compared, there were no significant differences.

Students who prepare to teach atypical children can expect to work with those needing special assistance in a tutorial or small group setting. It was notable that 123 are preparing to work with such children, while 104 expect to work in a regular classroom setting. There was, however, no significant difference in the ethnic stereotypes held by the two groups.

Since the population of Iowa includes relatively small numbers of children belonging to ethnic minority groups, ethnic stereotypes held by students expecting to teach within the state were compared to those who expect to teach elsewhere. A slight majority, 118, expect to teach elsewhere compared to 109 who expect to teach within the state of Iowa. There was no significant difference in the ethnic stereotypes held by the two groups.

Greater numbers of ethnic minority children can be found in cities than in suburban or rural communities. Only 46 students expect to teach in urban centers while the data
indicated that 179 expect to teach in the suburbs or rural communities. The investigation indicated that there was no significant difference in the ethnic stereotypes held by the two groups of prospective teachers.

It appears, in light of the data, that there is very little relationship between the professional aspirations of prospective elementary teachers and the ethnic stereotypes they hold.

When educational attainment of the fathers of prospective elementary school teachers was compared to the ethnic stereotypes they hold there was no significant relationship found. It is notable, however, that the relationship approached significance with the White ethnic group and with the Black ethnic group.

When educational attainment of mothers of prospective elementary teachers was compared with the ethnic stereotypes they hold, there was a significant relationship indicated for the White ethnic group, though no other group approached significance.

There was also a significant relationship between father's occupation and stereotype held for the White ethnic group. The relationship failed to approach significance for any of the other groups.

Since the occupations of mothers implies availability to the child during formative years, it was considered that there
might be a difference in the relationships between ethnic stereotypes held by prospective elementary teachers and their mothers who were homemakers, or who were employed outside the home in a variety of positions. The investigation revealed no significant relationships between ethnic stereotypes held by those whose mothers were homemakers and those whose mothers worked at a variety of other occupations.

In the state of Iowa communities with a population of less than 5,000 tend to have few ethnic minorities. Those with a population greater than 5,000 generally have greater numbers of ethnic minorities; therefore, ethnic stereotypes of prospective elementary teachers were compared to the size of their home towns. It was assumed that those who were reared in larger communities would have had more opportunities to interact with persons belonging to ethnic minority groups. There was no significant difference, however, in ethnic stereotypes held by the two groups.

Since the state of Iowa has relatively fewer numbers of people who belong to ethnic minority groups, it was considered that those who had lived outside the state for at least five years may have had more opportunity to interact with people belonging to other ethnic groups. There were 155 who indicated that they had always lived in Iowa and 64 who had lived outside the state for at least five years. When the groups were compared relative to the ethnic stereotypes
they held there was no significant difference.

Conclusions

Although the correlation between the White ethnic group stereotype and the Native American ethnic group approached significance, it is notable that not all ethnic groups were represented in the sample. Of 227 respondents, there were three Hispanic-Americans, one Black, one who did not indicate an ethnic identity group and no Asian-Americans or Native Americans. The remaining 222 were all members of the White ethnic group. This would seem to indicate that Whites found the Native Americans to be least like themselves.

It appears that there is no relationship between sex type of prospective elementary teachers and ethnic stereotypes they hold and in professional aspirations and ethnic stereotypes.

The only significant differences between biographical characteristics and ethnic stereotypes were with the father's occupation and with the educational attainment of mothers. In both cases the relationship was with the White ethnic group. All other biographical characteristics appeared to have little bearing on the ethnic stereotypes held by prospective elementary school teachers.

Findings indicate that prospective elementary school teachers are very homogeneous in the stereotypes they hold
for the five ethnic groups and these do not vary between groups.

**Limitations**

A major limitation is that the sample was drawn from five different institutions in the State of Iowa; hence the majority shared a Midwestern background. This limits generalizations to other geographical areas of the United States.

The study is limited by administering the instrument to intact classroom groups without random selection.

It must be noted that there was not equal distribution of respondents who were members of different ethnic groups.

Time of administration was limited to the spring term of 1976 which may have had an influence on the response to the instrument.

**Recommendations**

For further investigation, it is recommended that the instrument be modified to elicit additional background information concerning involvement experiences with ethnic minority groups. Questions concerning social experiences, employment, shared membership in organizations, and numbers of minority students in the high school graduating class might provide more accurate information for making comparisons.

Questions regarding expectations for future teaching positions should be addressed to specific interests for teaching children
of minority culture groups.

It is further noted that the number of items dealing with background information on the questionnaire could be reduced. This would allow for expansion of the numbers of polar adjectives included on the stereotyping test without extending time required for administration. A refinement of the test should include additional terms which are more specific and identify discrete areas of human behavior which contribute to stereotypic attitudes.

Several areas emerge for future study. Biographical data and professional aspiration of subjects provide information which could be utilized for a longitudinal study of these students as they move into the profession. Changes in ethnic stereotypes following the supervised teaching experience, and after several years in the field could be used to investigate influences beyond family and early experiences. Such information would be useful for planning inservice programs.

A comparison of these data and data gathered from teachers presently engaged in the profession could lead to an investigation of the research questions:

1. Are there significant differences in the ethnic stereotypes held by prospective elementary teachers and teachers in the field at the present time?

2. Are differences directly a result of teaching experience or generation factors? That is, being reared in a different time period, did teachers in the field bring a different set of ethnic stereotypes into the classroom when they began their professional career?
3. Is there a relationship between teaching effectiveness and ethnic stereotypes?

4. Is there a relationship between biographical characteristics and direct experiences with ethnic stereotypes?

5. Can ethnic stereotypes held by prospective elementary teachers be changed through experiences with minority children provided during the preservice program?

6. Can stereotypic attitudes toward ethnic groups be changed through a treatment program at the preservice level?

Horizontal studies replicated in other geographical areas of the country would provide information regarding the influence of environment on ethnic stereotypes held by teachers.

The data gathered can be utilized for revising teacher education programs to meet the goals of multicultural education.
CHAPTER VI. SUMMARY

The major purpose of the investigation was to identify ethnic stereotypes held by prospective elementary teachers, examine relationships between stereotypes held for different ethnic groups, and to examine relationships between stereotypes and selected background factors.

Four major research questions were investigated. Hypotheses derived from the questions were tested and results reported.

Question 1: Are ethnic stereotypes held by prospective elementary school teachers interrelated?

\( H_0^1: \) There is no significant difference in the relationships of stereotypes held by prospective elementary school teachers of the five ethnic groups as measured by the Semantic Differential technique.

Question 2: Are there differences in ethnic stereotypes held by prospective elementary school teachers who are male and those who are female?

\( H_0^2: \) There is no significant difference in ethnic stereotypes held by prospective elementary teachers who are male and those who are female.

Question 3: Are selected kinds of teaching assignment aspirations of prospective elementary teachers related to the ethnic stereotypes they hold?

\( H_0^3_a: \) There is no significant difference in ethnic stereotypes held by students who aspire to teach in the lower elementary grades and those who aspire to teach in the upper elementary grades.
There is no significant difference in ethnic stereotypes held by students who aspire to teach atypical children and those who aspire to teach in regular classrooms.

There is no significant difference in ethnic stereotypes held by students who expect to teach in Iowa and those who expect to teach outside the state.

There is no significant difference in ethnic stereotypes held by students who expect to teach in urban centers and those who expect to teach in the suburbs or rural communities.

Question 4: Are ethnic stereotypes held by prospective elementary school teachers related to selected biographical characteristics?

There is no significant relationship between the educational attainment of the fathers of prospective elementary school teachers and the ethnic stereotypes they hold.

There is no significant relationship between the educational attainment of the mothers of prospective elementary school teachers and the ethnic stereotypes they hold.

There is no significant relationship between the occupation of the fathers of prospective elementary school teachers and the ethnic stereotypes they hold.

There is no significant relationship between the occupation of the mothers of prospective elementary school teachers and the ethnic stereotypes they hold.

There is no significant relationship between size of home town in which prospective elementary school teachers were reared and the ethnic stereotypes they hold.

There is no significant difference in ethnic stereotypes held by prospective elementary school teachers who have always lived in Iowa and those who have lived at least 5 years outside the state.
An instrument was designed which was composed of two parts, a stereotyping test using the Semantic Differential technique, and a questionnaire for background information. The instrument was distributed to intact classroom groups at five different teacher education institutions in the state of Iowa. Colleges and universities selected for the investigation were: Clarke College in Dubuque, Iowa; Drake University in Des Moines, Iowa; Iowa State University in Ames, Iowa; the University of Northern Iowa in Cedar Falls, Iowa; and The Wartburg in Waverly, Iowa. The instrument was distributed, administered, and returned during the spring term of 1976.

The stereotyping test was administered and a grand mean generated for stereotypes of each ethnic group: White, Black, Hispanic-American, Asian-American, and Native American. The first hypothesis was tested by an intercorrelation of means. It was found that the lowest significant correlation was between the White ethnic group and the Native American group. Other ethnic groups were highly correlated.

A t test for a difference of means was performed to test the second hypothesis. There was no significant difference in the stereotypes of the five groups held by males and by females.

A series of t tests were performed for $H_0^a$, $H_0^b$, $H_0^c$, and $H_0^d$. There was no significant difference found in the ethnic stereotypes held of any of the groups by students.
preparing to teach upper elementary children and those pre-
paring to teach lower elementary children; for those preparing
to teach atypical children and those preparing to teach in
regular classrooms; for those who expect to teach in Iowa and
those who expect to teach outside the state; for those who
plan to teach in urban centers and those who plan to teach in
the suburbs or rural communities.

For $H_{04a}$, $H_{04b}$, and $H_{04c}$, data from each comparison group
was subjected to analysis of variance for each of the ethnic
groups. There was no significant difference found at the .05
level in relationships between educational attainment of
fathers and ethnic stereotypes of any of the groups. The data
did reveal significance at the .05 level for the relationship
between educational attainment of mothers and stereotypes held
of the White ethnic group. No other ethnic group stereotypes
were significantly related to educational attainment of
mothers.

There was a significant relationship between occupation
of fathers and stereotype held of the White ethnic group at
the .05 level of probability. No other ethnic group stereo-
types were significantly related to occupation of fathers.

For $H_{04d}$, a series of t tests was performed comparing the
means of the stereotyping test by students whose mothers were
homemakers and those whose mothers were employed in each of
the other selected occupations for each ethnic group. There
were no significant differences found for any of the ethnic
groups relative to any of the comparison groups.

There were no significant differences found in the
stereotypes of any of the ethnic groups for those who were
from small home towns and from urban areas, $H_0_{4e}$, or for those
who had always lived in Iowa and those who had lived outside
the state, $H_0_{4f}$. These hypotheses were examined using a test
for a difference of means.

In summary, using the instrument developed for the inves­
tigation, it was found that the ethnic stereotypes held by
prospective elementary teachers are highly interrelated for
White, Black, Hispanic-American, and Asian-American ethnic
groups. Stereotypes held of Native American and White groups
are not significantly related at the .05 level of probability.

Ethnic stereotypes held by males and by females are not
significantly different. There are no significant differences
in ethnic stereotypes held by those preparing to teach lower
elementary children and those preparing to teach upper ele­
mentary children or for those preparing to teach atypical
children and those preparing to teach in regular classrooms.
There is no difference in ethnic stereotypes held by those who
expect to teach in Iowa and those who expect to teach outside
the state. The investigation found no differences in ethnic
stereotypes held by those who expect to teach in urban areas
or those who expect to teach in the suburbs or rural
communities.
Stereotype for the White ethnic group is related to occupations of fathers and educational attainment of mothers of prospective elementary teachers, though there are no significant relationships between these factors and stereotypes held of the four other ethnic groups. Occupations of mothers and educational attainment of fathers are not significantly related to stereotypes held of any of the ethnic groups.

There were no significant relationships, found from the investigation, between the size of home towns in which prospective elementary teachers were reared and stereotypes they hold for each of the ethnic groups. No relationships were found to be significant between stereotypes held for any of the ethnic groups held by those who had always lived in Iowa and those who had lived outside the state.
BIBLIOGRAPHY


Faunce, R. W. 1969. Attitudes and characteristics of effective and not effective teachers of culturally disadvantaged children. Minneapolis Public Schools, Minneapolis, Minn. ERIC ED 039 289.


Iowa State Department of Public Instruction. 1975b. Guidelines for achieving a multicultural, sex bias free, curriculum in Iowa schools. Grimes Office Building, Des Moines, Iowa. 16 pages.


APPENDIX A: FLOW CHART
FLOW CHART OF PROCEDURE

Survey literature; establish need

Problem

No

Yes

Formulate hypotheses

Identify technique (Semantic Differential)

Review literature on S. D.

Identify polar adj.

Design stereotyping test

Identify biographical items

Design instrument

Identify sample

Contact participating institutions

Committee

Yes

Pilot instrument

No

Analyze data

No

Analyze reliability

Yes

Administer instrument

Test hypotheses

Formulate conclusions; summarize

Report findings

No
APPENDIX B: INSTRUMENT
ETHNIC STEREOTYPES HELD BY

PROSPECTIVE ELEMENTARY SCHOOL TEACHERS

Instructions: On the blank space at the top of the IBM answer sheet please write your student identification number (or Social Security number), the college or university at which you are now enrolled, and today's date.

Using a number 2 pencil, darken the space under the digit on the answer sheet which corresponds with each numeral in your identification number. Darken only one space on each line using a separate line for each numeral in your number. Line 1. should be used for the first digit in your number; line 2. for the second digit, etc.

Example: I.D. 560-24-8524

```
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
1. === === === === === === === === 2. === === === === === === === ===
3. === === === === === === === === 4. === === === === === === === ===
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
5. === === === === === === === === 6. === === === === === === === ===
7. === === === === === === === === 8. === === === === === === === ===
9. . . .
```

Beginning with line number 10, darken the space which corresponds to the number of your chosen response. Be sure to darken each space completely. If you must change a mark, erase cleanly. Do not make extraneous pencil marks on the answer sheet. Mark only one choice for each question. If there are two possible choices, determine which is most often true or which most nearly describes the situation.

10. The institution at which you are currently enrolled

1. Clarke College
2. Drake University
3. Iowa State University
4. The Wartburg
5. University of Northern Iowa

11. Classification

1. Freshman
2. Sophomore
3. Junior
4. Senior
5. Graduate

12. Major

1. Upper elementary
2. Lower elementary
13. Approval area
   1. Special education
   2. Early childhood education
   3. Remedial reading
   4. Other

14. Sex
   1. Male
   2. Female

15. Age
   1. 18 to 25 years
   2. 26 to 30 years
   3. 31 to 35 years
   4. Over 35

16. Marital status
   1. Married
   2. Single
   3. Divorced
   4. Widowed

17. Ethnic/racial identity group
   1. White
   2. Black
   3. Hispanic-American (includes Mexican-American, Cuban-American, etc.)
   4. Asian-American (includes Oriental)
   5. Native American (American Indian)
   6. Other

18. Population of home town
   1. Fewer than 2,000
   2. 2,000 to 5,000
   3. 5,001 to 10,000
   4. 10,001 to 75,000
   5. 75,001 to 200,000
   6. Greater than 200,000

19. Size of high school graduating class
   1. Less than 100
   2. 100 to 200
   3. 201 to 300
   4. 301 to 500
   5. Greater than 500

20. Place of residence
   1. Always in Iowa
   2. Outside the state of Iowa for at least 5 years
   3. In a foreign country at some time
21. Travel experiences
   1. Never farther than 100 mile radius from home
   2. Greater than 100 miles from home but not outside the boundaries of the state of Iowa
   3. Outside the state of Iowa but not farther than the states which share boundaries with Iowa
   4. A greater distance than the surrounding states but not outside the mainland of the United States
   5. Have traveled to a foreign country

22. Occupation of mother
   1. Exclusively a homemaker
   2. Professional
   3. Clerical
   4. Sales
   5. Trades (beautition, etc.)
   6. Other

23. Occupation of father
   1. Farmer
   2. Professional
   3. Business
   4. Trades (plumber, electrician, etc.)
   5. Laborer
   6. Other

24. Educational attainment of mother (indicate the highest level completed)
   1. Elementary school
   2. Junior high school
   3. High school
   4. Two years of college
   5. Baccalaureate Degree
   6. Graduate school
   7. Other

25. Educational attainment of father (indicate the highest level completed)
   1. Elementary school
   2. Junior high school
   3. High school
   4. Two years of college
   5. Baccalaureate Degree
   6. Graduate school
   7. Other

26. In what kind of school setting would you prefer to teach?
   1. Urban
   2. Suburban
   3. Rural
27. In what locality do you expect to teach?
1. In or near your home town
2. Within Iowa but some distance from your home town
3. Outside the state of Iowa but within the United States
4. No preference

28. Have you ever held a position in which you assumed a responsibility for a group of children?
1. Outdoor activities (summer recreation, Scouts, etc.)
2. Church related (Sunday school, Vacation Bible School, etc.)
3. Substitute teacher, aide, (assisted in public or private school)
4. Classroom teacher under contract
5. At least 2 of the above
6. None of the above

29. Financial arrangements for your education
1. Totally supporting yourself
2. Totally supported by parents
3. Totally supported by Social Security, grant, scholarship, etc.
4. You are contributing to your educational costs by working.

30. How many years do you expect to teach?
1. From 1 to 5 years
2. From 6 to 10 years
3. Until retirement
4. Do not expect to teach for several years after graduation

In the next section indicate how you would describe certain ethnic groups within the United States. Adjectives frequently used to describe human characteristics have been chosen and arranged on a seven-point scale reflecting two extremes. Read each pair of adjectives carefully and decide to what degree you consider that the characteristic is true of most members of the particular ethnic group. Note that a favorable adjective may appear at either end of the scale. Mark each group independently and avoid looking back to make comparisons. Since characteristics are ranked on a seven-point scale, you will disregard positions numbered 7, 8, and 9 on the answer sheet.

Example: ESKIMOS

31. generous 0 1 2 3 4 5 6
   extremely very fairly neutral fairly very extremely
If you believe Eskimos to be "very" generous, you would mark your answer sheet thus: 0 1 2 3 4 5 6

32. ...

Please note that there will be a blank area on your answer sheet as you will begin with line 35. Turn to the next page and begin.
Using the scale at the top of the list of adjectives, please indicate how you feel the White ethnic group within the United States can best be described. Begin with number 35. on the answer sheet and mark the number which corresponds with your choice along the scale.

Scale:

\[
\begin{array}{ccccccc}
0 & 1 & 2 & 3 & 4 & 5 & 6 \\
\text{extremely} & \text{very} & \text{fairly} & \text{neutral} & \text{fairly} & \text{very} & \text{extremely} \\
\end{array}
\]

35. practical __:__:__:__:__:__:__: impractical
36. kind __:__:__:__:__:__:__: cruel
37. dumb __:__:__:__:__:__:__: intelligent
38. superior __:__:__:__:__:__:__: inferior
39. sad __:__:__:__:__:__:__: happy
40. clean __:__:__:__:__:__:__: dirty
41. cowardly __:__:__:__:__:__:__: brave
42. peaceloving __:__:__:__:__:__:__: warlike
43. honest __:__:__:__:__:__:__: dishonest
44. lazy __:__:__:__:__:__:__: hardworking

Please turn to the next page.
Using the scale at the top of the list of adjectives, please indicate how you feel the Black ethnic group within the United States can best be described. Begin with number 45. on the answer sheet and mark the number which corresponds with your choice along the scale.

<table>
<thead>
<tr>
<th>Scale:</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>extremely</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>very</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fairly</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>neutral.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>fairly</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>very</td>
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<td></td>
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<tr>
<td>extremely</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

45. practical __:___:___:___:___:___:___: impractical
46. kind __:___:___:___:___:___:___: cruel
47. dumb __:___:___:___:___:___:___: intelligent
48. superior __:___:___:___:___:___:___: inferior
49. sad __:___:___:___:___:___:___: happy
50. clean __:___:___:___:___:___:___: dirty
51. cowardly __:___:___:___:___:___:___: brave
52. peaceloving __:___:___:___:___:___:___: warlike
53. honest __:___:___:___:___:___:___: dishonest
54. lazy __:___:___:___:___:___:___: hardworking

Please turn to the next page and avoid looking back.
Using the scale at the top of the list of adjectives, please indicate how you feel the Hispanic-American (Mexican-Americans, Puerto Rican-Americans, etc.) ethnic group within the United States can best be described. Begin with number 55. on the answer sheet and mark the number which corresponds with your choice along the scale.

Scale:

```
0 : 1 : 2 : 3 : 4 : 5 : 6 :
extremely     very     fairly neutral findViewById(53)     fairly     very     extremely
```

55. practical ___:___:___:___:___:___:___: impractical
56. kind ___:___:___:___:___:___:___: cruel
57. dumb ___:___:___:___:___:___:___: intelligent
58. superior ___:___:___:___:___:___:___: inferior
59. sad ___:___:___:___:___:___:___: happy
60. clean ___:___:___:___:___:___:___: dirty
61. cowardly ___:___:___:___:___:___:___: brave
62. peaceloving ___:___:___:___:___:___:___: warlike
63. honest ___:___:___:___:___:___:___: dishonest
64. lazy ___:___:___:___:___:___:___: hardworking

Please turn to the next page and avoid looking back.
Using the scale at the top of the list of adjectives, please indicate how you feel the Asian-American (including Oriental) ethnic group within the United States can best be described. Begin with number 65. on the answer sheet and mark the number which corresponds with your choice along the scale.

Scale: 0: extremely, 1: very, 2: fairly, 3: neutral, 4: fairly, 5: very, 6: extremely

65. practical
66. kind
67. dumb
68. superior
69. sad
70. clean
71. cowardly
72. peaceloving
73. honest
74. lazy

Please turn to the next page and avoid looking back.
Using the scale at the top of the list of adjectives, please indicate how you feel the Native-American ethnic group within the United States can best be described. Begin with number 75, on the answer sheet and mark the number which corresponds with your choice along the scale.

Scale:

<table>
<thead>
<tr>
<th></th>
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<td>very</td>
<td>fairly</td>
<td>neutral</td>
<td>fairly</td>
<td>very</td>
<td>extremely</td>
</tr>
</tbody>
</table>

75. practical __:__:__:__:__:__:__:__: impractical
76. kind __:__:__:__:__:__:__: cruel
77. dumb __:__:__:__:__:__:__: intelligent
78. superior __:__:__:__:__:__:__: inferior
79. sad __:__:__:__:__:__:__: happy
80. clean __:__:__:__:__:__:__: dirty
81. cowardly __:__:__:__:__:__:__: brave
82. peaceloving __:__:__:__:__:__:__: warlike
83. honest __:__:__:__:__:__:__: dishonest
84. lazy __:__:__:__:__:__:__: hardworking

Thank you very much for your participation. Avoid looking back or changing any responses. Return both the questionnaire and the answer sheet to your instructor.
APPENDIX C: LETTERS OF TRANSMITTAL
April 20, 1976

Head, Department of Education

Dear

A research study is being conducted which is intended to provide information regarding ethnic stereotypes held by prospective elementary teachers. Students enrolled in advanced level education courses are being surveyed. Your institution and four others in Iowa have been selected for the study in order to secure a representative sample. There will be no comparisons made between student responses from the various colleges and universities. Your assistance in distributing and administering the instrument to two classes will be greatly appreciated.

The questionnaire will require about 30 minutes of class time. Written instructions for marking IBM answer sheets and number two pencils will be provided. Respondents are requested to give biographical information and to indicate beliefs regarding ethnic groups within the United States using the Semantic Differential technique.

Thank you for your cooperation and assistance with this project.

Sincerely,

[Signature]

Mary K. Aldridge  
Assistant Professor of Education  
University of Northern Iowa

Dr. Harold Dilts  
Professor of Education  
Iowa State University
Dear Prospective Teacher:

A research study is being conducted which will provide information about the background of prospective elementary school teachers in Iowa and how they view racial/ethnic groups within American society. The profile will enable teacher educators to plan programs which will better prepare prospective elementary teachers. Your assistance with this project is appreciated.

Responses will remain confidential. Identification numbers are requested in order that biographical data can be matched with other sections of the questionnaire. You will need to allow about 30 minutes to mark the instrument.

Thank you for your participation.

Sincerely,

Mary K. Aldridge
Assistant Professor of Education
University of Northern Iowa

Harold Dilts
Professor of Education
Iowa State University
APPENDIX D: ANALYSIS OF VARIANCE TABLES
Table 19. Analysis of variance, educational attainment of fathers by White

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean square</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main effects</td>
<td>1</td>
<td>.309</td>
<td>.309</td>
<td>3.020</td>
</tr>
<tr>
<td>Residual</td>
<td>223</td>
<td>22.792</td>
<td>.102</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>224</td>
<td>23.101</td>
<td>.103</td>
<td></td>
</tr>
</tbody>
</table>

Table 20. Analysis of variance, educational attainment of fathers by Black

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean square</th>
<th>F-ratio</th>
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<tbody>
<tr>
<td>Main effects</td>
<td>1</td>
<td>.386</td>
<td>.386</td>
<td>3.237</td>
</tr>
<tr>
<td>Residual</td>
<td>223</td>
<td>26.626</td>
<td>.119</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>224</td>
<td>27.013</td>
<td>.121</td>
<td></td>
</tr>
</tbody>
</table>

Table 21. Analysis of variance, educational attainment of fathers by Hispanic-American

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean square</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main effects</td>
<td>1</td>
<td>.259</td>
<td>.259</td>
<td>2.218</td>
</tr>
<tr>
<td>Residual</td>
<td>223</td>
<td>26.053</td>
<td>.117</td>
<td></td>
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<tr>
<td>Total</td>
<td>224</td>
<td>26.312</td>
<td>.117</td>
<td></td>
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</table>
Table 22. Analysis of variance, educational attainment of fathers by Asian-American

<table>
<thead>
<tr>
<th>Source of variation</th>
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<th>Sum of squares</th>
<th>Mean square</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main effects</td>
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<td>.143</td>
<td>.143</td>
<td>1.412</td>
</tr>
<tr>
<td>Residual</td>
<td>223</td>
<td>22.499</td>
<td>.101</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>224</td>
<td>22.641</td>
<td>.101</td>
<td></td>
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</table>

Table 23. Analysis of variance, educational attainment of fathers by Native American

<table>
<thead>
<tr>
<th>Source of variation</th>
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<th>Sum of squares</th>
<th>Mean square</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main effects</td>
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<td>.042</td>
<td>.042</td>
<td>.398</td>
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<tr>
<td>Residual</td>
<td>223</td>
<td>23.558</td>
<td>.106</td>
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<td>Total</td>
<td>224</td>
<td>23.601</td>
<td>.105</td>
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Table 24. Analysis of variance, educational attainment of mothers by White

<table>
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<tr>
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<th>Sum of squares</th>
<th>Mean square</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main effects</td>
<td>1</td>
<td>.402</td>
<td>.402</td>
<td>3.914</td>
</tr>
<tr>
<td>Residual</td>
<td>221</td>
<td>22.690</td>
<td>.103</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>222</td>
<td>23.092</td>
<td>.104</td>
<td></td>
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</tbody>
</table>
Table 25. Analysis of variance, educational attainment of mothers by Black

<table>
<thead>
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<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main effects</td>
<td>1</td>
<td>.016</td>
<td>.016</td>
<td>.137</td>
</tr>
<tr>
<td>Residual</td>
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<td>.118</td>
<td></td>
</tr>
<tr>
<td>Total</td>
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<td>26.016</td>
<td>.117</td>
<td></td>
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</table>

Table 26. Analysis of variance, educational attainment of mothers by Hispanic-American

<table>
<thead>
<tr>
<th>Source of variation</th>
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<th>Sum of squares</th>
<th>Mean square</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main effects</td>
<td>1</td>
<td>.032</td>
<td>.032</td>
<td>.276</td>
</tr>
<tr>
<td>Residual</td>
<td>221</td>
<td>25.455</td>
<td>.1115</td>
<td></td>
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<td>25.486</td>
<td>.1115</td>
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Table 27. Analysis of variance, educational attainment of mothers by Asian-American

<table>
<thead>
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<th>Source of variation</th>
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<th>Sum of squares</th>
<th>Mean square</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main effects</td>
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<td>.009</td>
<td>.009</td>
<td>.089</td>
</tr>
<tr>
<td>Residual</td>
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<td>.101</td>
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</tr>
<tr>
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Table 28. Analysis of variance, educational attainment of mothers by Native American

<table>
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<th>Sum of squares</th>
<th>Mean square</th>
<th>F-ratio</th>
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</thead>
<tbody>
<tr>
<td>Main effects</td>
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<td>.005</td>
<td>.052</td>
</tr>
<tr>
<td>Residual</td>
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<td>22.955</td>
<td>.104</td>
<td></td>
</tr>
<tr>
<td>Total</td>
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<td>22.961</td>
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Table 29. Analysis of variance, occupation of fathers by White

<table>
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<tr>
<th>Source of variation</th>
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<th>Mean square</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main effects</td>
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Table 30. Analysis of variance, occupation of fathers by Black

<table>
<thead>
<tr>
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</table>
Table 31. Analysis of variance, occupation of fathers by Hispanic-American

<table>
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<th>Mean square</th>
<th>F-ratio</th>
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<tr>
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<td>.698</td>
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Table 32. Analysis of variance, occupation of fathers by Asian-American

<table>
<thead>
<tr>
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<th>df</th>
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<th>Mean square</th>
<th>F-ratio</th>
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</thead>
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<td>.063</td>
<td>.660</td>
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Table 33. Analysis of variance, occupation of fathers by Native American

<table>
<thead>
<tr>
<th>Source of variation</th>
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<th>Sum of squares</th>
<th>Mean square</th>
<th>F-ratio</th>
</tr>
</thead>
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