

PROBLEMS ENCOUNTERED BY NON-TRADITIONAL STUDENTS ENROLLED IN  
SEX-TYPED SECONDARY VOCATIONAL EDUCATION PROGRAMS,

by

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## CHAPTER 1

### Introduction

#### Background of the Problem

Sex-role stereotyping is not new in American society or other cultures; it has been found to be a stable phenomenon widely shared among most people in the population. However, it has recently become a concern of educators and in particular vocational-technical educators. This concern is at least partially a result of federal legislation mandating the minimization of the effects of stereotyping in education (Title IX of the Educational Amendments, 1972). The vocational educators' concern is deservedly placed, since many vocational programs tend to reinforce labor market patterns of sex stereotyping of occupations (Perkins, 1975). Although vocational education has been judged guilty of perpetuating sex-role stereotyping by reason of not attempting to eliminate it, vocational educators did not invent it nor plant the seeds.

Many factors may play a role in influencing sex-role stereotyping before students even enter school. Very few studies have been carried out on the occupational aspirations of preschoolers; but of those that have been done, the major finding is that early sex-role stereotyping exists. Kirchner and Vondracek (1973) found that girls have fewer specific occupational choices than boys. Schlossberg and Goodman (1972) even found stereotypic choices in the kindergarten children.

### Conceptual Framework for the Study

The Federal government has mandated that sex-role stereotyping be eliminated (Title IX of the Educational Amendments, 1972) in all educational programs receiving federal aid. Furthermore, Title I of the Vocational Education Amendments of 1976 is very explicit in stating that the states are to make efforts to overcome sex bias and sex-role stereotyping in vocational education. Laws and legislation have not, however, ended sex discrimination, sex bias, or sex-role stereotyping in society.

As a result of these laws and concerns, much research is beginning to be done in the area of sex-role stereotyping. Research on occupational stereotypes to date has usually had two basic aims: (a) to describe the stereotypes of selected occupations and (b) to determine the variables that affect stereotypes (Barnett & Baruch, 1974). Research clearly indicates that sex is a variable related to occupational stereotypes (Iglitzin, 1972; Saario, Jacklin & Tittle, 1973; Schlossberg & Goodman, 1972; Siegel, 1973; Walker, 1958). Research further reveals that many students in school have first-hand knowledge of only a few occupations; thereby allowing stereotypes to potentially serve as a foundation for their vocational choices (Barnett & Baruch, 1974). On the other hand, little research has been done on students who have crossed sex-role stereotypic barriers to enter sex-typed fields.

Those non-traditional students that have entered sex-typed fields of work are very much in the minority, have few role models, and are most likely confronted with various obstacles and prejudices. If one knew the problems that non-traditional students encounter as the result of preparing themselves to enter sex-typed fields of work, then vocational guidance

counselors, teachers, and administrators could better understand their problems and how their needs could be better met. Unfortunately, research seems to be centered around promoting more counseling "without a rationale for the specific content of the counseling" (Barnett & Baruch, 1974, p. 34).

Few studies have investigated the problems facing non-traditional students as a result of being enrolled in sex-typed vocational education programs. Furthermore, even fewer studies have sought to determine the problems as the students perceive them. Statements about their problems have frequently been based on observations and someone else's perceptions of what problems they encounter instead of being founded on formal research. The research which has actually sought to determine the students' assessment of their concerns has not gone into great enough depth. Of the few studies conducted in this area, Kane and Frazee (1978) and Kane, Frazee, and Dee (1976) only questioned the students about six school-related problems; no opportunity was given to mention other types of problems. It is only fair, however, to mention that the primary purpose of the researchers was not to concern themselves solely with ascertaining student problems.

When Eliason (1977) attempted to determine the problems as perceived by community college level non-traditional female students in sex-typed programs, the students were interviewed about their experience with male teachers and male students in their program. They were also given the opportunity to respond to the open-ended question of what problems they encountered. It is not clear, however, as to whether the students were to answer the question in terms of male teachers and students



or problems in general. Problems of females in community colleges in general was the major thrust of the study and not just to determine only the problems of non-traditional students enrolled in sex-typed programs of study, so the necessary depth was once again missing.

There is also a major gap in research concerning males in predominately female vocational programs and occupations. Research is lacking in the investigation of problems these non-traditional males have encountered as a result of pursuing a career in a sex-typed field of work.

Hence, there is a need to investigate in detail the problems and concerns of non-traditional male and female students enrolled in sex-typed programs. Through student assessment of problems, school personnel can begin to aid and assist these non-traditional students in their pursuits in a sex-typed program. The results of the study can be used by educators to help make potential students of sex-typed vocational education programs aware of problems they may encounter and at the same time help to minimize and/or eliminate those problems. Positive action of this nature would be most helpful in making vocational opportunities available to all students regardless of their sex. Furthermore, baseline data secured can serve as a basis for needed counseling services and contribute to possible program modifications for non-traditional students enrolled in sex-typed vocational education programs.

#### Statement of the Problem

This study identified problems which non-traditional students enrolled in sex-typed vocational education programs in four school divisions in a large metropolitan area have encountered as a result of such

enrollment and the impact of those problems on the student. More specifically, the following research questions were posed:

1. What are the problems encountered by non-traditional students as a result of being enrolled in sex-typed vocational education programs? In particular, what are the: (a) school related problems; (b) curriculum and operational problems; (c) peer problems; (d) family related problems; (e) problems with self; and (f) other problems, that the students encounter in these areas?

2. What is the extent of the non-traditional students' concern about problems they encounter as a result of being enrolled in sex-typed vocational education programs?

3. What are the greatest problems or concerns encountered by non-traditional students in sex-typed vocational education programs?

#### Assumptions of the Study

The basic assumptions of the study are:

1. Students will be able to conceptualize and verbalize their concerns and problems.

2. Students will honestly and candidly report problems as they perceive them.

#### Scope and Limitations of the Study

The following limitations should be considered when drawing conclusions about the generalizability of research findings:

1. Participation in the study is limited to non-traditional students enrolled in sex-typed vocational education programs in four school divisions in a large metropolitan area.

2. Participation in the study is limited to secondary public school vocational education programs.

3. Problems identified by non-traditional students are restricted to only those that they attribute to being in a sex-typed vocational education program.

#### Definition of Terms

For purposes of uniformity in the interpretation of the study, the following terms have been defined:

Affirmative action. Taking steps to remedy a situation based on sex which was caused by past discrimination (Eliason, 1977).

Career. An occupation requiring training, followed as one's life work (Barnett & Baruch, 1974).

Coding. The process by which the raw interview data are systematically transformed into a precise description of relevant content characteristics (Holsti, 1969).

Content analysis. A research technique for the objective, systematic, and quantitative description of the content of communication which may be used to determine the emphasis of responses by counting frequencies (Kerlinger, 1973).

Frequency count. The method of measuring content characteristics whereby every occurrence of a particular characteristic is tallied (Holsti, 1969).

Metropolitan area. An area consisting of cities together with their suburbs which compose an economically and socially integrated unit with a large population nucleus of 50,000 or more inhabitants per city (Derived from U. S. Bureau of Census, 1977).

Non-Traditional and Traditional student. Within a vocational program in a school, a student will be referred to as non-traditional if 75% or more of the enrollees are of the opposite sex of the student. Conversely, within a vocational program in a school, a student will be referred to as traditional if 25% or less are of the opposite sex of the student.

Occupation. An individual's principal work (Barnett & Baruch, 1974).

Occupational stereotyping. Commonly held notions about occupations and people who hold those jobs (Derived from Barnett & Baruch, 1974).

Sex-role stereotyping. Commonly held notions of what role a particular sex should play in society.

Sex-typed fields or programs. Fields of work or vocational education programs in which the employment or enrollment of one sex is 75% or greater.

Sexism. Words or actions that arbitrarily assign roles or characteristics to people on the basis of sex (National Council of Teachers of English).

Socioeconomic status. A combination of social and economic factors affecting one's relative rank in a hierarchy of prestige (Derived from Webster's Third International Dictionary, 1969).

Theme. A sentence, a proposition about something, or an assertion about a subject matter expressed in one or more terms. A theme takes the form in which issues and attitudes are usually discussed (Kerlinger, 1973).

Theme category. The compartments into which themes are classified (Holsti, 1969).

Vocational education programs. Educational programs designed to prepare individuals for paid or unpaid employment, or for additional preparation for a career requiring other than a baccalaureate or advanced degree (P.L. 94-482, p. 2211).

## CHAPTER 2

### Review of Related Literature

This chapter presents a review of relevant literature. It is organized into seven sections: (a) background of the problem; (b) stereotypic perceptions and aspirations; (c) variables affecting occupational preference; (d) problems encountered by non-traditional students; (e) collection of data by interviewing; (f) content analysis; and (f) summary.

#### Background of the Problem

The practice of differentiating between sex roles can be traced back to references made in the Bible and even before that time. Sex-role stereotyping still exists today and is evident in many occupations. Researchers have investigated the question as to where these stereotypic perceptions about the suitability of occupations for males and females originate.

Several studies of key influencers on vocational choice report that their findings indicate that parents are by far the most important influence (Pallone, Rickard, & Hurley, 1970 and 1973; Steinke & Kaczkowski, 1961; Peters, 1941). Further, school books from the early grades forward reflect an adult world in which the man is primarily the one who works outside the home and the woman inside. In those cases where women are shown working outside the home, they are usually depicted as teachers and nurses. In

educational tests, items referring to activities or careers frequently use "he" or "man" as subjects (Saario et al., 1973). It is only fair to mention that much progress is being made in eliminating many stereotypic references, although much more needs to be accomplished. Even children's television programs and toys reflect the same occupational stereotypes and presumably act as strong influences on young children's attitudes about their future occupations.

Historical perspective of male and female education. Schooling beyond the elementary level during the eighteenth and early nineteenth centuries was primarily for boys and was provided at private academies whose purpose was to prepare males for college. With the advent of industrialization, more and more emphasis was placed on business and mechanical vocations; hence, the high school was implemented to take care of preparing males for these new vocations (Stephens & Van Til, 1972). Thus, in the beginning, females had limited occupational opportunities available to them which was in part due to the educational barriers.

During the 1700's, females in poor families were taught only the basics of reading and writing and were taught in the home. More affluent families engaged tutors, sent their daughters to dame schools which were usually conducted in someone's home, or sent them to seminaries for girls. A major breakthrough for improving female education came when private academies started to admit girls in the late 1700's. However, females were still segregated from males and were even given a much easier and less demanding curriculum (Stephens & Van Til, 1972).

Between 1836 and 1851, the Lowell School Committee in Massachusetts reported that females made up approximately 60% of all students enrolled in high school, which was the case in most high schools of that time (Tyack, 1966). One reason for a high ratio of females to males was that girls who desired an occupation outside of the home frequently turned to teaching, and teaching called for more education than did many of the occupations which boys entered (Tyack, 1976). The Annual Report of the Lowell School Committee for 1848-1849 even went so far as to state that high school was intended to qualify the male for the common callings of life and females for teaching or other "responsible duties" belonging to her sex (Tyack, 1966). Thus, one can see high schools were helping perpetuate stereotypic concepts of sex and occupational roles.

The manual training movement (around 1870) was the predecessor of vocational education. Manual education was concerned with industrial efficiency, the preparation of skilled workers, and pedagogical reform. In particular, there was the expectation that it would produce a moral reformation.

One way in which the moral efficacy of manual training was revealed was in the calls for the domestic education of females. Manual educators maintained that boys and girls once learned values and skills at home from their mothers and fathers; but in the 1870's and 1880's, they argued that this situation no longer prevailed in homes. There was special concern at this time for girls who were no longer assured of learning homemaking from their mothers, especially among the poor. Educators generally thought poor mothers were



unwilling or incapable of teaching their daughters the value of a moral family life. Therefore, sewing and cooking were quickly introduced into the public curriculum to help remedy this apparent malady (Lazerson & Grubb, 1974). Courses for manual training had already set the precedent for vocational education to follow in establishing separate courses for males and females as based on the role that they played in society at large. And in society, of course, those roles were also segregated, so no question was ever raised about sexual stereotyping of occupations.

At the turn of the twentieth century, manual training was on its way out and vocational education was being ushered into its place. Methods, content, and justification were basically the same but the purpose was different; vocational education would prepare students for specific occupations (Lazerson & Grubb, 1974). During this time, increasing numbers of females began entering the job market; hence, the question was raised as to the place of females in vocational education. However, there existed a deeper concern that females entering the labor market would undermine the family and home; therefore, vocational training of this nature was perceived as a further threat to the destruction of the traditionally female roles as wives and mothers.

Vocational training for females was also seen as being economically foolish, since females tended to work for shorter periods of time than men (Lazerson & Grubb, 1974). These brief periods of work may be due to several factors:

Traditionally, American society has defined marriage and childrearing (the 'wife and mother role') as the

most appropriate and desirable activity for adult women. However, work activities outside the home have been defined as appropriate during certain periods of the life cycle such as the time between completion of schooling and marriage and prior to the entry of children in the family (Pavalko, p. 162).

As a compromise to females wanting vocational training and people's concern over the role of the female in society, vocational training for women focused on traditionally defined female occupations and vocational courses centered around home economics and domestic service. At the turn of the century, training was primarily in dressmaking, millinery, and cooking; then after 1920, secretarial science training became predominate. In general, any skill that was considered valuable for working inside instead of outside the home was given particular emphasis, such as cooking and sewing. Thus, vocational education for the labor market was subordinate to vocational education for home management. Vocational education was not denied to females but it was greatly restricted in scope (Lazerson & Grubb, 1974).

In the conclusions of the Douglas Commission Report of 1906, the same feelings about females and their role in the marketplace and home were repeated. The report stated that the care of the home had been overlooked in education and that there was a need for females to be instructed in sanitation; purchase, preparation, and care of foods; and care of children (Douglas Commission Report, 1906).

The National Education Association (NEA) in 1910 stated the same sentiments when they said the two aims of vocational education for females were: (a) to enable females to take care of the home in such a way that high standards of health and morals prevailed and (b) to train females for feminine occupations. The NEA report went on to say that generally females were not expected to have a vocation outside of the home for any extended length of time for the same reasons as Pavalko (1976) mentioned (National Education Association Report, 1910).

On the other hand, boys' vocational education was seen as preparation for a permanent occupation in the job market. In the 1912 National Association of Manufacturer's "Report of the Committee on Industrial Education," a few of the occupations mentioned specifically to be those for boys to study were brick-laying, carpentry, machine work, and other skilled craftsman occupations (National Association of Manufacturers Report, 1912). Thus, the skilled craftsman type of occupations were generally reserved for boys to enter.

Even more recently, enrollment figures show the overabundance of males in traditionally male-dominated vocational-technical programs and the overabundance of females in traditionally female-dominated programs. Today females are still generally concentrated in three program areas: Consumer and Homemaking, Health, and Office Occupations; whereas, the Agriculture, Technical, and Trades and Industry areas have predominately male enrollments. Only the Distribution program area can be said to be integrated with roughly the same

proportions of males and females (U.S. Department of Health, Education and Welfare, 1976).

But even within each program area, there are also patterns of sex segregation. Hence, in order to get a clearer picture of enrollments by sex in each vocational program, it is also necessary to look at the enrollments for each vocational area under each program (U.S. Department of Health, Education, & Welfare, 1976). Clearly the categorization of students into traditionally male and female occupational programs is evident. This kind of pattern supports the tradition reviewed earlier relative to the restricted occupational choices for men and women as a result of sex-role stereotyping.

Legislation on sex bias. The past several years have brought much legislation concerning the equality of the sexes and the elimination of sex discrimination, sex bias, and sex stereotyping. Title IX of the Educational Amendments of 1972 prohibits discrimination in educational programs and activities receiving federal aid; it seeks to do away with sex bias and thereby provide a choice of programs based on ability and interest for both male and female students (Federal Register, 1975). In addition to mandating non-discrimination, Title IX also encourages affirmative action. Title VII of the Civil Rights Act seeks to end unequal pay for equal work in many occupations. Affirmative Action programs seek to end sex discrimination by requiring contractors dealing with the United States government to eliminate sex discrimination and job imbalances (Chesler & Goodman, 1976). Along with Affirmative Action programs, two Executive Orders, 11246 and 11375, ban discrimination on the basis of sex in any

business furnishing goods and services to the United States government. Finally, the Employment and Training Administration, Department of Labor, has sponsored various programs designed to help women and members of minority groups enter apprenticeships in the skilled trades and eventually enter male sex-typed occupations. Some of the programs include the Recruitment and Training Program, Inc., the National Urban League, Better Jobs for Women, Women in Apprenticeships Programs, Inc., and the Human Resources Development Institute (Lehman, 1977b).

The Educational Amendments of 1976 (P.L. 94-482) go further than ever before in spelling out the responsibilities of the states to overcome sex bias in vocational education. The states are required by law to specify in detail the action they are taking to minimize sex bias, provide incentives for local school systems to minimize sex bias, and hire personnel to monitor the success of these efforts to minimize sex bias.

At this time, agreement with vocational education legislation seeking to eliminate sexual stereotyping matters little, because it is a law and it is tied to federal dollars. However, laws and legislation have not ended sex discrimination, sex bias, or sex stereotyping in society. In order to bring about the necessary changes in vocational programs, many attitudes throughout society must change in regard to sex-role expectations in our culture.

#### Stereotypic Perceptions and Aspirations

Sex-role stereotyping in and out of school needs to be taken under consideration because of the impact it has on occupational

choice. Schlossberg and Goodman (1972) found that almost all children aspire to occupations in a stereotypic manner. However, sex-role stereotyping of occupational choice was discovered to be somewhat higher in subjects from low socioeconomic backgrounds when compared with middle socioeconomic subjects. Another finding was that females were perceived as more unable to perform masculine occupations than vice versa. They also noted that children were more critical of non-traditional females in male sex-typed occupations than of non-traditional males in female sex-typed occupations.

Iglitzin's (1972) study of fifth grade girls and boys discovered that girls were less stereotypic about occupations than boys, as were children of working mothers. However, most home tasks were seen as a woman's work. In one of the two studies by Iglitzin, only 10.6% of the fifth grade girls and 14.7% of the fifth grade boys said that women should work at any time they would like.

Several studies dealing with college-age subjects have found that these students share strikingly similar stereotypic views of high level occupations such as scientist and college professor. Furthermore, the stereotypes remain highly stable over the subjects' four years of college (O'Dowd & Beardslee, 1958; 1961). Indications are that by this time, stereotypes of occupations are well established. Furthermore, stereotypic images are consistent at different colleges for males and for females (Beardslee & O'Dowd, 1959).

There is also some tendency for subjects intending to pursue an occupation to view that career more favorably than their uncommitted peers (Beardslee & O'Dowd, 1961). North and Hatt (1949) also found

that when people rate their own job, or one closely related to it, they almost always rate it considerably higher than the average evaluation of the position. Furthermore, children usually assign a higher rank to their father's occupations than do most other people (Gunn, 1963; Weinstein, 1958).

It is not known whether commitment to an occupation changes the image or whether those with a more favorable image are drawn to the occupation or whether both processes contribute to this difference. Contrary to most other studies, Walker (1958) found no significant differences in stereotypes between those planning and those not planning to enter an occupation. Walker's study further found no significant differences in occupational stereotypes between the sexes.

In a study conducted by Weinstein (1958), children were questioned about their perceptions of the adult stratification system. When asked for the criteria in which the adult world is stratified, all subjects answered occupation. Occupation was either the only answer given or was given in combination with something else such as income, also a popular response.

North and Hatt's (1949) research established prestige ratings for 90 occupations from a nation-wide cross section sample in three age groups: 14-20, 21-39, 40 and over. Males and females seldom differed very much in rating the relative standing of a specific occupation. Gunn (1963) selected eleven occupations from those whose prestige had already been established in the North-Hatt study and interviewed boys in the first grade through the twelfth in order to determine their perceptions of the occupations' standing in the

community. Boys in grades ten to twelve ranked the occupations in basically the same order as did the adults in the North-Hatt study.

Once again by using the North-Hatt study ratings as a basis of comparison, even children in the third grade have been found to be clearly aware of differences in occupational prestige (Simmons & Rosenberg, 1971). In addition, children at every age level (grades three through twelve) perceived the inequality of opportunities which exists in society.

In conclusion, stereotypic perceptions about the suitability of occupations for males and for females can be found at every age level; furthermore, children tend to aspire to stereotypic occupations for their sex (Barnett & Baruch, 1974). Hence, the prestige level of various occupations is very accurately perceived at a very young age.

The difference between the two sexes on occupational preference and choice appear very early in children. In fact, the effects of sex appear earlier than either race or social class and with more impact. Since children can have firsthand knowledge of only a few occupations, it stands to reason that stereotypes can potentially serve as the foundation for vocational choice.

At the preschool- and elementary-age, the effects of sex are found to be prevalent in vocational preference. For example, at this age, girls already tend to resemble each other in their occupational aspirations. Approximately two-thirds of girls at this age level choose either teacher or nurse (Boynton, 1936; Clark, 1967; Deutsch, 1960; Looft, 1971; Nelson, 1968; Siegel, 1973). This indicates that the girls have already limited the range and level of their choices.



On the other hand, the same studies find that boys, in general, select two to three times as many different occupations as girls. The most popular choices of elementary-age boys are policeman, fireman, athlete, and doctor. When comparing the status of the occupations chosen by girls to those chosen by boys, very little difference is found since both girls and boys choose occupations of relatively high status in this age group (Olive, 1972). In addition to these findings, Boynton (1936) and Siegel (1973) found no overlapping of choices between the males and females of their studies. Therefore, these studies in conjunction with many more clearly indicate the early effect of sex-role stereotyping of occupations in both sexes (Saario et al., 1973).

By the seventh to the ninth grades, the occupational aspirations of boys begins to surpass that of girls. This happens mainly because boys start to make changes in their vocational choices and opt for higher status occupations (Campbell & Parsons, 1972). Wylie (1963) also found that girls in grades seven to nine, unlike boys, underestimated their abilities to do college work. Therefore, it appears that at the middle-school age, more differences begin to emerge between the sexes in relation to their occupational aspirations.

At the high school level, boys continue to choose a greater variety of occupations than girls. Teacher and nurse continued to be favorites for girls, but now clerical worker accounts for a large majority of their choices. On the other hand, the most popular choices for boys are engineer and physician (Flanagan, 1964; Powell & Bloom, 1962; Witty, Garfield, & Brink, 1941).

Austin (1968) pointed out that girls have an additional choice which is generally not available to boys--"housewife." This desire was commonly found among white middle-class girls (Clark, 1967; Deutsch, 1960), but may or may not be reflected in answers to questions about occupational choice. For example, when approximately 150 fifth and tenth grade girls in a study were asked the free-choice question: "What would you like to do when you're an adult; that is, what job would you like to have?," only two subjects responded "housewife" (Baruch, 1973). This finding could reflect the belief that being a housewife is not a job. Actually, there is a tendency for only middle-class girls to choose housewife as an occupation (Clark, 1967).

Black females, however, do not usually consider the option of being a housewife given any question to which to respond. Unlike white females, black females rarely choose housewife as what they want to be as an adult (Boynton, 1936; Deutsch, 1960; Gray, 1944). Furthermore, black females were found by Gray (1944) to have higher occupational aspirations than black males, which he attributed to the females considering themselves as potential economic providers.

Sex differences in reasons for choosing an occupation was studied by Singer and Steffere (1954). When the subjects, high school seniors, were presented with a checklist of values, significant sex differences were found. Helping others received the highest ranking from senior girls; the major value for senior boys was being boss and high pay.

Eleventh grade girls, mostly white and middle class, were the subjects of research by Putnam and Hansen (1972) to determine the

relationship of self-concept and feminine role to their vocational maturity. On the Crites' Vocational Development Inventory, girls tended to be somewhat vocationally immature in comparison to their male counterparts. Furthermore, girls' scores on the Tennessee Self-Concept Scale were lower than boys. However, on the Feminine Role Rating Inventory, those girls that viewed their role as being more liberal rather than traditional had a higher level of vocational maturity than their more traditional counterparts. Hence, career-oriented females tend to resemble males in terms of scores on the Crites' Vocational Development Inventory.

Because of the limited number of choices being made by students, it is important for males and females to have a more comprehensive vocational awareness. Until occupations are no longer categorized as being proper exclusively for either men or women, the choices available to young people will be limited to the selection traditionally presented to them. Hence, jobs about which they do not learn will not be alternatives for them. Consequently, those students are forced to make career choices from a narrower range for jobs than would otherwise be available to them without the presence of sex-role stereotyping. It would be more productive for society and more fulfilling for individual students, male and female, if they were allowed to make career choices based more on their talents, interests, and abilities and less on values and traditions.

#### Variables Affecting Occupational Preference

Knowing that males and females tend to choose different occupations, it becomes imperative to identify variables which have an

affect on occupational preference or choice. These variables are particularly important because they may serve to influence young people to choose occupations according to stereotyped sex-roles. In addition and even more pertinent to the proposed study, any variable which has been found to affect or influence occupational preference or choice may potentially do so in either a positive or negative way depending on the agreement between the influential variable and the vocational choice of the individual.

School textbooks used in the early grades were found by Saario et al., (1973) to reflect an adult world where women rarely work outside the home. In those few exceptions where they were shown working, they were usually depicted in the traditional roles of teacher and nurse. In addition, educational test items referring to activities and careers use "he" or "man" as subjects. It is thought that all this helps to establish sex-role stereotypes of occupations and influence the occupational preference of children to some degree. However, there is evidence that people have a much greater impact on occupational choice than impersonal informational sources such as books, brochures, catalogs, filmstrips, etc. (Barnett & Baruch, 1974).

Pallone et al., (1970) asked black and white eleventh and twelfth graders in a study to rank order a list of people in terms of their influence on occupational preference. For black and white males and females, the same-sex parent was ranked first or second in influence and a person holding the preferred occupation was in the other position. Other studies have also reported the same important

influence of the same-sex parent for females (Pallone et al., 1973; Steinke & Kaczkowski, 1961) and males (Peters, 1941).

Among males 25 and older in age, Jenson and Kirchner (1955) found that socioeconomic status was a critical factor in occupational choice. In five out of the ten occupational categories, the majority of subjects followed their father's occupations. Where there is a difference, it is generally due to a step up the occupational ladder of status.

Kreppner's (1963) studies with senior high school students also suggest that sex-role identification with the parent of one's own sex is a variable interacting with vocational choice. Kreppner found that a daughter's occupational preference is directly related to her mother's occupational level, and a son's preference is related to his father's occupation. In particular, the study found a significant relationship between the occupational level of the boys and the suggestion made by their fathers and mothers. Fathers' suggestions for their sons were also significantly related to their own vocations; however, this was not so for their suggestions for their daughter's. On the other hand, the mother's job was significantly related to her daughter's occupational preference.

There are several cultural and social factors that are of particular importance when trying to understand the vocational-choice process of females. Psathas (1968) pointed to some sex-role issues as being major factors in the feminine occupational choice such as: husband's income and geographical location; beliefs about men's attitudes toward career women; and feelings about sharing child care. Three additional factors were found by Zytowski (1969) to be critical to influencing

females' choices: age of entry; the span of participation, such as the length and interruptions anticipated; and the degree of participation including masculinity or femininity of the occupation.

On the basis of 300 interviews conducted, Eliason (1977) found non-traditional females in predominantly male programs indicate that role models were essential in their choice of career goals. Furthermore, more than 50% listed male teachers or family members as people who influenced their career choices.

Epstein (1973) in an exploratory study of black females who were successful in male-dominated occupations interviewed thirty-one black females individually. Due to a proportionately greater number of successful black professional females than white professional females, Epstein was interested in the relevant background factors which might explain their success. Important variables included: (a) role models of mothers who were economic providers; (b) strong parental achievement values and support for upward mobility; and (c) small likelihood of a successful marriage to a good economic provider. Also interesting was the finding that guidance counselors reportedly did not encourage their ambitions.

Clearly the mother as a role model is important in the career development of females. Siegel and Curtis (1963) interviewed forty-three college students and found that maternal attitude toward work was the only variable significantly related to the subjects' career orientation. However, high occupational goals in females may develop in conjunction with some degree of identity with their fathers (Baruch, 1973) especially where the father's occupation level is higher than the

mother's. Once again, significantly more aspirers were often the oldest or the only child and less often had male siblings.

Henning (1973) interviewed twenty-five of an existing 100 female presidents or vice-presidents in major businesses to determine what background variables were found to be relevant to their success. Most relevant to their achievement were: (a) parental encouragement or exploration and setting own standards; (b) mothers with education equal to fathers; (c) special closeness to fathers; and (d) help from parents in fighting gender-related taboos in school. In addition, all subjects were the only child or the eldest of all-girl families--none had male siblings. Hence, the females were possibly using their fathers as role models, and fathers were possibly more willing and supportive in this role in the absence of a male sibling. Indications from this study and Tidball's study (1973) are that females tend to find it easier to excel in the absence of males.

Gandy's study (1973) with 150 male college students found no effects of birth order or sex of siblings on their occupational choice. In another study of black and white males (Duncan, Featherman, & Duncan, 1972), it was further discovered that the number of siblings (regardless of their sex) is not positively correlated to either educational or occupational achievement; however, their father's occupation and education was highly correlated. Hence, it is concluded that the father's occupation has a direct influence and that the father's education has an indirect but important influence on his son's occupation.

When Barnett (1973) studied the relationship between occupational prestige and occupational preference, sex differences were

found at every age (ages 9 through 17). The correlation between the two variables was higher for the males than for the females. The data suggest that the subjects learned at a very early age the attractiveness of prestigious occupations. It was obviously sex-related learning, since the boys learned to prefer prestigious occupations and girls learned to reject them.

A study in 1958 by Dipboye and Anderson (1959) compared data on occupational values in two age groups composed of ninth and twelfth graders from urban, suburban, and semirural communities. The subjects were asked to rank order nine occupational values: (a) security, (b) prestige, (c) salary, (d) interesting work, (e) advancement, (f) working conditions, (g) relations with others, (h) independence, and (i) benefits. Males and females of both age groups ranked interesting work first and security second. In general, girls tended to rank prestige, interesting work, working conditions, and relations with others high; boys have higher rankings to salary, advancement, and independence. The researchers concluded that occupational values are generally well established by the ninth grade and change little during high school.

In 1970 Anderson and Bosworth (1971) conducted a similar study using the same methodology with subjects who were ninth graders in 1958 and subjects who were ninth graders in 1970. Once again interesting work was ranked first with both samples which tends to indicate a negligible change of occupational values over the twelve-year period between 1958 to 1970.

In a study of 1,500 female achievers listed in Who's Who of American Women (Tidball, 1973), attendance at all-female colleges was



significantly related to achievement. A high correlation of achievers to the proportion of female faculty was found, and the proportion of males in the college environment was negatively correlated to the number of achievers. Tidball hypothesized that this may indicate a negative impact of association with males and the need for role models. It does not necessarily mean that sexual segregation is desirable but does indicate that action is needed to remedy any negative influences which might occur as a result of sexual integration.

In a study sponsored by the Indiana State Board of Vocational and Technical Education (1977) involving high school students, identification of five factors was made as primary influences on student career plans: experience in courses, interests, role models, economics, and peer and/or relatives' influences. However, only three of these factors were identified as influential by non-traditional students choosing sex-typed careers: experience in courses, role models, and interests. Major influences contributing to the development and maintenance of stereotypical thinking identified by all students were tradition, differing expectations, school-related experiences, and role models.

In summary, research shows many different variables affecting an individual's occupational preference or choice. Because of the influence these variables have on occupational preference, they also play an important part in the development of occupational stereotyping and in some instances may even help to perpetuate sex-role stereotyping. Furthermore, these same variables have been shown to present non-traditional students with reasons for concern over their preferences.

### Problems Encountered by Non-Traditional Students

For those non-traditional students who do choose to study in a sex-typed area of interest or prepare to enter a sex-typed occupation, many barriers and problems may need to be dealt with along the way (Eliason, 1977; Kane et al., 1976; Lehman, 1977a).

Increasing numbers of males in mid-life today are more willing to leave unsatisfying occupations, even though they may be high paying occupations which required a major investment in training (Barnett & Baruch, 1974). In studies about the fear of success, males indicate a desire to get out of the prestigious "rat race" occupations. Hence, as a result of the liberation from male sex-role stereotyping, there may be more males moving toward occupations in sex-typed fields of work.

Females who change their occupational choice to a more traditional occupation for their sex have been found to be motivated by the desire to avoid success (Horner, 1972). The motive tends to be connected with expectations that success will have negative consequences associated with the inhibition of becoming involved in competitive situations.

The stability of occupational plans was examined in a study involving students during their three years in high school and six months after graduation (Schmidt & Rothney, 1955). Two-thirds of the subjects changed their occupational plans at least once. Non-traditional students who chose sex-typed occupations were significantly more likely to change their choice than were the other subjects. Reasons for such changes were not indicated.

Students using college students as subjects report similar findings (Carmody, Fenske, & Scott, 1972). Occupational choices of

college students and high school graduates were compared to what they had made while still in high school. In all samples, consistency of the choice of the occupation was approximately 40%. However, traditional subjects choosing sex-typed occupations and females, in general, were somewhat more stable than those non-traditional subjects who originally chose sex-typed occupations. Rosenberg's study (1957) with college students confirmed the same 40% consistency in choice when reinterviewing his sample. The research also indicated that students whose plans did not conform to social pressures to follow sex-role stereotypes were more likely to make changes in occupational choice and move toward more socially acceptable occupational choices.

Females who enter occupations in which males are in the majority are often confronted with "negative attitudes of educators, employers, friends, family, and counselors when they attempt to find support for their occupational preferences" (Farmer, 1978b; Farmer & Backer, 1977).

School related problems. Counselors are probably the most obvious people to be considered as a source that students can turn to when in need of help with problems and social pressures that are related to the school setting. Students, however, may actually encounter a problem by going to a counselor with sex-role stereotypic problems. Thomas and Stewart (1971) conducted a study involving the response of high school counselors to non-traditional and traditional female clients' career goals. The counselors were presented with audiotapes of interviews with females where they talked about themselves, their values, and their home lives. But before the counselor heard each

tape, they were told that the female client had made either a traditional or non-traditional career choice for their sex. Based on the counselor's use of the Gough Adjective Check List, the following variables were measured: the counselor's acceptance of each client; the counselor's perceived appropriateness of the client's career choice; and the counselor's perceived need for further counseling of the client.

Results of the study revealed no differences in the counselor's acceptance of the traditional and non-traditional clients' career choices. However, traditional clients who selected sex-typed careers were seen as making more appropriate choices, and non-traditional clients who selected sex-typed careers were seen as needing more counseling. Hence, Thomas and Stewart (1971) concluded that counselors have some negative attitudes toward non-traditional students who choose sex-typed careers and, in general, feel better about people who fit into more "suitable" slots.

Several other studies have also documented sex bias in male and female counselors against non-traditional females entering male sex-typed occupations (Abramowitz, Weitz, Schwartz, Amira, Gomes, & Abramowitz, 1976; Lesser, 1976; McEwen, 1975; Oliver, 1975). In addition to the bias of counselors, Tanney and Birk (1976) found evidence of bias in career information materials which may further influence the way counselors respond to non-traditional clients expressing an interest in pursuing a career in a sex-typed field.

Lehmann (1977a) reported a recent survey of postsecondary vocational schools which found that non-traditional females who chose training in a male sex-typed field received virtually no support from

their guidance counselors and schools. It is not clear, however, what support is needed or expected.

In Eliason's study (1977) of traditional and non-traditional females in programs at community colleges, most females did not think they were treated differently than males with regard to faculty and staff attitudes. However, there were some reported problems of sexist treatment on the part of instructors and personnel in certain male sex-typed programs by non-traditional females reporting problems (Eliason, 1977). Unfortunately, the exact nature of the discriminatory attitudes and actions is not described in the report.

Kane and Frazee (1978) also report that teachers expect non-traditional female students to perform at a higher level than traditional males in vocational programs. Furthermore, non-traditional females perceive that teachers find it more difficult to adjust to females when there are very few of them in class (Kane, Frazee, and Dee, 1976). The sex of the teacher was not determined by the study, but it is presumed that the teachers were male. Furthermore, in an unpublished report (McEwen, Brock, Moseley, Muncey, Rich, Davis, & Porter, 1978) of sex-role stereotyping in vocational education in Maine, it was indicated that non-traditional males entering sex-typed programs encounter difficulties with teachers. The difficulties, however, were not delineated.

A review of the catalogs of public and private two-year institutions in the Center for Women's Opportunities study revealed questionable pictures, language, and format in the majority of the catalogs (Eliason, 1977). Female students were most often pictured

"as nursing students providing bedside care, as typists or key punch operators, or as passive recipients of male instruction in clerical or retail sales training" (Eliason, 1977, p. 8). Furthermore, female role models in technical instruction or administrative recruitment were rarely pictured. These were problems that the staff conducting the study discovered that needed to be changed, but it is not known whether or not the students were actually concerned over the questionable portrayal of women in the college catalogs. In addition to the college catalogs, admission brochures, textbook, and testing materials were found to also portray women in passive, traditional roles. It is not known, however, whether these were concerns of non-traditional students who were enrolled in the sex-typed vocational programs.

Curriculum and operational problems. Kane and Frazee (1978) report that non-traditional females in sex-typed vocational education programs in secondary schools feel male students are better prepared for their secondary training. The study also points out that male secondary students have had more technical, math, and science subjects before entering the vocational education program, which can possibly put the female student at a disadvantage.

Snell (1977) found in a study conducted in New Jersey: That some of the girls anticipated feeling uncomfortable in a shop setting and others were taken back by the physical strain of some of the work suggests a lack of familiarity with the specific skills and responsibilities involved. (p. 60)

Eliason (1977) also reported that non-traditional females wishing to enter male sex-typed vocational education programs must overcome certain curriculum problems. Few females have "ever learned to utilize simple tools, solve technical problems, or confront scientific or mathematical problem-solving" (Eliason, 1977, p.10). It is suggested that credit courses in basic mechanical skills and technologies be developed and implemented. It is concluded by Eliason that because males have more technical subject training, they have a decided advantage over the female students.

Peer related problems. Peer pressure is reported to have considerable influence over occupational choice (Lehmann, 1977a). This pressure can even go as far as discouraging males and females from entering vocational programs which they may be truly interested in taking. Research also reports that non-traditional females in male sex-typed vocational programs at secondary schools have been found to have more problems with males in their classes than problems with their teachers or counselors (Kane & Frazee, 1978). Non-traditional males in female sex-typed programs have also been found to encounter problems with peer pressure as a result of their enrollment (McEwen et al., 1978).

Lehmann (1977a) reported that non-traditional females in post-secondary vocational schools receive little or no support from other females. Furthermore, Eliason (1977) states that non-traditional females in male sex-typed programs encounter sexism from male students. Snell (1977) also found that:

The reluctance many high school girls have about joining traditional male shops seems to stem more from the fear of resentment and ill feeling from the

boys than from any fear of failing to master the skills involved. (p. 60)

Hence, it appears that peer related problems exist with regard to the receptivity by traditional students in sex-typed programs.

Family related problems. Parents of non-traditional students have also been found to object to their children entering sex-typed programs. Some parents even fear that their children will lose masculinity or femininity (Lehmann, 1977a). Further, parents may go as far as denying reality by saying that girls do not really need to work when the mother of the family has spent her entire adult life working outside the home. Non-traditional male students have also reportedly encountered problems and pressures from parents because of their enrollment in female sex-typed vocational education programs (McEwen, et al., 1978). Consequently, the aversion of non-traditional students' parents to their enrollment in sex-typed programs can create concerns and problems for those students who go ahead and enroll in the program in spite of the parents discouragement or disapproval.

Problems with self. Eliason (1977) discovered that most non-traditional females pursuing an occupation in a sex-typed field in community colleges tend to be more self-confident than traditional females in vocational programs. They also see their abilities as being as high as males in their classes. These women definitely anticipate sex discrimination in their occupational pursuits in school and on the job, but they appear to be unaware of the specific nature of the discrimination.

In male sex-typed vocational programs where there are three or more non-traditional females enrolled, a supportive comradeship



develops which often makes the difference between the success and failure of females in such programs (Eliason, 1977). Non-traditional females enrolled in vocational programs report often feeling isolated without fellow female peers in the program. With female peers present, a support network is formed to help ward off any discriminatory practices which might occur. Kane, Frazee, and Dee's (1976) study tends to reinforce this finding. On the whole, non-traditional females in classes with few fellow females for classmates had the most problems. Furthermore, the extent of the problems generally decreased with an increase in the number of non-traditional females in the predominantly male classes. Classes of four or more other non-traditional females have a much lower percentage of females who perceive problems or who perceive more than one problem when compared to classes with fewer females enrolled.

Visible female role models, such as those represented by instructors, other students in the program, and people in the particular field of work, have been shown to have a positive effect on the confidence level of non-traditional female students in predominantly male programs (Eliason, 1977). It is suggested that efforts be made to employ females in "role model" positions so that more females will be attracted to and retained in predominantly male occupational programs (Eliason, 1977).

#### Collection of Data by Interviewing

The interview represents a personal contact between an interviewer and a respondent. "The interview can range from a highly

structured situation with a planned series of questions to a very informal talk with no structure except for some areas of discussion desired by the interviewer" (Miller, 1970, pp. 84-85). The continuum may represent opportunity and danger for the interviewer depending on the degree of freedom and flexibility of the interview schedule. On one hand, it provides the researcher with the opportunity to explore many topics in detail but with the danger of not yielding the appropriate data (Miller, 1970). As Oppenheim (1966) points out, there are three interacting variables present when interviewing: the interviewer, the respondent, and the interview schedule. All three variables can have an important influence on the results of the interview.

Advantages of the personal interview. There are many possible advantages to be derived when using the interview for data collection:

1. The interview usually yields a high percentage of returns, because most people are willing to cooperate.
2. The data secured is more likely to be correct than data secured by other techniques, since the interviewer can explain or answer any questions the respondent may have.
3. The interviewer is able to secure more spontaneous reactions than would be the case where a written form is mailed out for the informant to think about for awhile.
4. The interviewer can control which individual answers the questions; whereas, with mail surveys, the respondent has this opportunity to confer with others before the questions are answered.
5. The interview may take long enough to allow the respondent to become oriented to the topic under investigation consequently facilitating recall of relevant material.

6. A delicate question can be handled more effectively in a personal interview situation than by other survey techniques.

7. More of the respondent's time may be acquired for a survey utilizing the interview technique than would be the case if the interviewer were not present to elicit and record data (Miller, 1970).

Oppenheim (1966) states that the greatest advantage of the interview is its flexibility. The interviewer can insure that the respondent understands the objective of the research and the questions being asked. In addition, interviews can probe further when certain responses are encountered; respondents can be asked to classify their answers; respondents can make ratings or assessments; and the interviewer can build and maintain rapport in order to keep the respondent interested and responsive throughout the interview. In conclusion, Oppenheim (1966) maintains that interviews provide an undisputed advantage of providing researchers with rich and spontaneous information which mailed questionnaires could not hope to obtain. Whether the interview or the questionnaire is more valid for use in a research study depends on the degree to which the researcher knows exactly what information will be obtained and what the possible range of answers might be (Gorden, 1966). Interviewing is believed to be most valuable and appropriate when a research study seeks to discover the beliefs, attitudes, values, knowledge, and perceptions of individuals (Gorden, 1966). Hence, in this type of research study, the most direct and often the most fruitful approach is to ask the individuals themselves.

Disadvantages of the personal interview. The interview is not without limitations. The following disadvantages have been noted when utilizing the interview techniques for collecting data:

1. The time and transportation costs may be high when using the interview method.
2. The human equation may distort the returns if the interviewer does not ask the question exactly as printed on the schedule.
3. Data recorded from interviews may be inaccurate and/or incomplete.
4. There may be only certain periods of time during a day or week when interview subjects are available and the interviewer would have to accommodate that schedule (Miller, 1970).

Oppenheim (1966) and Williams (1973) also point out that interviewing can be fraught with possibilities of bias. Even though the same interview schedule is used and the interviewing procedures are standardized, there may be differences in the way the questions are asked which may or may not influence the results. In addition, what is meant by the respondent and what is recorded as the respondent's answer can be selected and hence possibly bias. Furthermore, the interviewer may reveal his/her own attitudes by the tone of voice used, the way the question is read, the interviewer's appearance, or the interviewer's accent, etc.

Williams (1973) maintains that one of the major problems in interviewing stems from the respondent's inability or unwillingness to communicate. Facts and information held by an unwilling respondent may be distorted or even withheld altogether. Frequently, the reason

for a respondent to be unwilling to communicate is the fear of reprisal for communicating certain information or the threat of the information to the respondent's ego (Williams, 1973). Another limitation for the researcher may be the inability of the respondent to answer certain questions. And finally, it is pointed out that the respondent may be able to render information or accurate information because of the failure of memory or memory bias on the respondent's part (Williams, 1973).

Recent work in communications indicate that a person will communicate in a given situation if he/she feels such communication will bring about a change or effect a desirable action. Respondents may also be motivated to communicate because of the satisfaction gained from talking with a receptive, understanding interviewer. Optimum communication occurs if the respondent perceives the interviewer as being capable of understanding and as being completely accepting or tolerant of the viewpoints expressed by the respondent (Gorden, 1966).

Williams (1973) maintains that status characteristics and the role performance of the interviewer determine the attitudes of the respondent engaged in the interview. Research studies indicate that the greater the disparities among obvious status characteristics between the interviewer and the respondent, the greater the chance that the respondent will bias the response. Furthermore, the race of the interviewer has been found "to be consistently associated with bias only when social distance is high and when an interview question is highly threatening" (Williams, 1973, p. 229). However, Hyman, Cobb, Feldman, Hart, and Stember (1970) when considering the effects arising

from differences in race only found that the white interviewer has a greater chance of obtaining higher proportions of so called "proper" or "acceptable" answers to opinion or attitudinal questions. Hyman, et al., (1970) found that similarity between the interviewer and the respondent, i.e., sex, socioeconomic status, and age, have no necessary relationship to the rapport between the two except among respondents of male interviewers. Both male and female respondents of female interviewers appear to be equally high with regard to rapport. "Group similarity is related to rapport only in the case of male interviewers. All other combinations fail to reveal any direct relationship" (Hyman, et al., 1970, p. 154). However, it is noted that there is some evidence that group similarity may be one factor which can help induce rapport between the interviewer and the respondent (Hyman, et al., 1970).

Interviewing style and format. The interviewing style will determine how standardized or nonstandardized the interview is. "The standardized interview is designed to collect precisely the same categories of information from a number of respondents; and the answers of all respondents must be comparable and classifiable" (Gorden, 1966, p. 60). Furthermore, it is imperative that the questions in the interview be asked in the same way for each respondent, so the researcher can be sure that any differences in the answers are due to differences among the respondents rather than in the questions themselves (Gorden, 1966). "Subtle differences in the form or content of a question may in some instances elicit distinctly different answers" (Gorden, 1966, p. 60).

There are two sub-types of the 'standardized' interview, the scheduled and the nonscheduled. The 'scheduled' interview not only specifies the questions in advance but also uses the questions in the same order with each respondent. The 'nonscheduled' interview gives the interviewer some choices as to the order of the questions, freedom to attempt alternative wordings of the same question, and freedom to use neutral probes if the first response to a question is not clear, complete, or relevant (Gorden, 1966, p. 61).

The completely scheduled interview clearly specifies the objectives of the research project in terms of specific questions which must be asked in a fixed sequence with specific words (Gorden, 1966).

Question sequence and question types are also important considerations when devising interview schedules. At the start of the interview, it is advisable to begin with some easy, impersonal questions in an attempt to build rapport with the respondent. The "funnel" approach is a well-known type of question sequence technique utilized when interviewing. The funnel approach starts with a very broad question and then progressively narrows down to more specific questions. Often times, various "filter" questions may be utilized along with the funnel approach in order to exclude a respondent from a particular question sequence if the questions are irrelevant. The idea behind using the funnel approach with the various filter questions is to avoid putting ideas into the respondent's mind and also to save time (Oppenheim, 1966).

In an attempt to deter making suggestions of attitudes to the respondents when they may have none, Gallup (1947) has suggested that his "Quintamensional Plan of Question Design" be used. This question design first starts with questions which attempt to find out whether the respondent is aware of or has considered an issue at all. Second, open-ended questions are asked in order to determine the respondent's general feelings on the topic at hand. Third, specific questions are asked of the respondent about the subject. Fourth, questions are designed to find out the reasons for the respondent's views. And finally, an inquiry is made of the respondent to assess how strongly he/she feels about the issue.

All questions, however, are either "open" or "closed." The open or free-answer types of questions are not followed by any kind of choice; on the other hand, a closed question is one in which the respondent is offered a choice of alternative answers. Closed questions may be as simple as requiring a yes or no reply. Because of the open-ended question allows for a free answer, it necessitates recording the reply in full (Oppenheim, 1966).

When probing the attitude, reaction, and ascertaining information that is interwoven in a social system, open-ended questions are appropriate and powerful as a research tool (Miller, 1970). "The chief advantage to using open questions is the freedom that it gives to the respondent" (Oppenheim, 1966, p. 41). The respondent can answer freely without being encumbered by a prepared set of alternative answers. Most importantly, because the information obtained from the



respondent is spontaneous, the reply may yield data worthwhile as a basis for new or further hypotheses to be formulated.

However, the open-ended question will take more interview time. Furthermore, the analysis of open-ended questions may require a code guide and careful independent observers to help in establishing the validity and reliability of the coding for each question (Miller, 1970). Oppenheim (1966) also points out that the classification process which requires the coding and categorizing of data can be extremely time-consuming. If open-ended questions are employed in the interview, it is advised that a few be chosen to address the specific purpose of the research study (Miller, 1970).

With closed questions, alternative answers offered leads the respondent in a particular direction. The fact that the respondent's thoughts are being directed does not necessarily make the question invalid or worthless, however. The validity of using closed questions can be substantiated by how well it suits the requirements of the research. Closed questions are easy and very quickly answered. In addition, quantification is a simple task. Hence, more questions can be asked with less time and money being used (Oppenheim, 1966).

Disadvantages of the closed-ended questions include the loss of spontaneity and expressiveness. Furthermore, bias may have been introduced by forced-choice types of questions. Alternatives presented, may cause the respondent to consider alternatives he/she might not have normally considered. In addition, the alternative may not include choices that the respondent would like to consider. In general, closed questions are often cruder and less subtle than open ones. "There may also be some loss of rapport, if respondents

become irritated because they feel that the choice of answers fail to do justice to their own ideas" (Oppenheim, 1966, p. 43).

When analyzing the data obtained in an interview, there is always the problem of loss of information by the condensation and compression of data. This is particularly true when open-ended questions are employed. The question is then posed, at what stage does the coding and classification of data take place: during the interview, field coding, or after the interview by using completely recorded answers. In general, the content of the question and the complexity of the answers will largely determine when coding occurs. The use of closed questions and/or field coding may help eliminate irrelevant information early on in the research. The decision as to whether to use questions in open or closed form will in part be decided by the possibility and the suitability of supplying alternative answers (Oppenheim, 1966).

In general, all questions on the interview schedule should be phrased so that there is no suggestion as to the most appropriate response in order to receive undistorted responses. Questions should also deal with a single concept in order for the researcher to be able to clearly determine the respondent's answer (Gorden, 1966).

Time is another important aspect of interviewing which should be considered in order to use it to the researcher's best advantage. Interviewing time should be kept within a 45-minute time span in order to insure the best possible responses to questions. After 45 minutes, public opinion interviewers have reported that respondents begin to grow tired and consequently show less interest (Miller, 1970).

Recording the interview. The tape recorder can be an invaluable tool for recording interviews, particularly when engaging in exploratory interviewing. One unique advantage to the tape-recording of the interview is that the data obtained can be analyzed several times by the same or different individuals. Furthermore, the more the thrust of the research is geared to exploring unanticipated types of responses and the less sure the researcher is of the categories of information being relevant to the problem, the more valuable and necessary it is to use a tape recorder. A more obvious advantage is the availability of an accurate and concise record of what is said in the interview which can also avail itself to reanalysis (Gorden, 1966).

Disadvantages of tape-recording include primarily those concerning economy due to the cost of tapes and recording machines, in addition to the high cost per interview for transcribing and coding the relevant information (Gorden, 1966).

The problem of transcribing the information from a tape-recorded interview depends on how much of the total flow must be transcribed, either because it is clearly relevant, near-relevant, or provides a context in which to interpret the relevant. The proportion to be transcribed from the tape could "vary" from none to 90 percent. It would be none only if coders were to listen to the tape for information clearly falling into relevant categories for which only a frequency count is necessary. If such information occurs rarely, the only way to do a reliability check

is to have two coders listen independently to the same tape . . . and then check to see if they recorded the same numbers in the same categories. (p. 276)

As a general rule, information should be transcribed unless it is clearly irrelevant. When in doubt about the relevancy of the data, it should initially be transcribed and if necessary it can be rejected later during the coding process (Gorden, 1966).

When utilizing a tape recorder, several precautions should be taken in order to facilitate optimal interpersonal relations (Gorden, 1966):

1. The interviewer should become thoroughly familiar with the machine so that he does not feel insecure in its use or devote too much attention to it.
2. The physical setting should be arranged, if possible, so that the tape recorder is out of the respondent's sight.
3. The microphone should be inconspicuous and out of the direct line of sight as the interviewer and respondent face each other.
4. The use of the recording machine should be explained in forthright and matter-of-fact way.
5. Once the interview begins, the interviewer should show no awareness of the tape recorder's presence. (p. 275)

The transcribed data should be coded by the interviewer and another person familiar with the research problem. The independent

coders are used as a reliability check to the interviewer's coding (Gorden, 1966).

. . . . If the second coder does not code some material in the same way, it is often because he sees less information in the material than the interviewer does. In this case, the interviewer might become aware that he is judging on the basis of additional information and insights which have not been transcribed from the tape. Often, there is a certain 'gestalt' in the total interview which is lost in the transcription, thus possibly making the original interviewer's judgment more accurate. At any rate, the crosscheck between the interviewer and the noninterviewer provides a more balanced view and forces the interviewer to support his interpretations with clearer evidence.

(p. 277)

Summary. In summary, the interview technique can serve as a valuable tool for collecting data for research studies in which it has been judged to be the best way to obtain the needed information. This judgment can be made by weighing the advantages and disadvantages of the personal interview method in regard to the particular research project being undertaken. Once a decision to use the interview technique is made, the interview schedule must be compiled with great care in order to insure that the research questions of the study will be answered by the most efficient means. Furthermore, the interview procedure should also be standardized in order to assure the same treatment

for all respondents. Finally, the analysis of data must be checked by an independent source besides the interviewer in an attempt to insure reliability. Having followed these procedures, the interview method of collecting data should yield meaningful data for the researcher.

### Content Analysis

Content analysis is a research technique for the objective, systematic, and quantitative analysis of the content of communication which may be used to determine the emphasis of responses by counting frequencies (Kerlinger, 1973). Transcripts from audio tapes recorded during an interview may be used as the source data when utilizing content analysis procedures.

Coding is used in the content analysis process to systematically transform raw data from the tapes into units which yield an accurate description of the relevant content characteristics (Holsti, 1969). Rules by which the data will be systematically analyzed are needed to serve as an operational link between the raw data and the research question or hypothesis; hence, coding rules are a central part of the research design. In preparing the coding rules for a research study, the researcher must establish (Holsti, 1969):

1. How the research problem will be defined in terms of categories.
2. What unit of content is to be classified.
3. What system of enumeration will be used.

Categorization is an important part of content analysis and should directly reflect the theory and/or the problems the study is investigating. Five general principles for category construction in

content analysis were suggested by Holsti (1969). These principles state that:

1. Categories should reflect the purpose of the research, i.e., conceptual and operational definitions are established.
2. Categories should be exhaustive, i.e., all relevant data from the transcripts are capable of being placed into a category.
3. Categories should be mutually exclusive, i.e., content data cannot be placed in more than a single category cell.
4. Categories should be independent, i.e., content data placed into one category does not affect the classification of other data.
5. Categories should be derived from a single classification principle, i.e., conceptually different levels of analysis are completely separate.

Once appropriate rules for coding and categories have been defined content analysis can then become operational.

The researcher may seek to discover, define, and test categories of data obtained via the interview technique of data collection. The researcher may begin the study with prepared questions on an interview schedule, but have little knowledge of categories appropriate for the answers. Another alternative for the researcher is to devise a tentative "a priori" set of categories which are to be tested in an exploratory interview situation (Gorden, 1966).

- . . . . The only criteria by which to judge any set of categories arrived at by any method are (a) how relevant the categories are to the problem at hand, (b) whether the categories include the full-range of

relevant responses, and (c) how reliably the information can be classified by using the system. (p. 68)

Once themes or responses have been obtained via data collection and classified into categories, quantification of the data may then be performed. The most widely used method of measuring content characteristics is to take a frequency count, in which every occurrence of a given theme or response is tallied (Holsti, 1969).

In conclusion, content analysis is the method most often used to analyze data obtained via the interview technique. Jackson (1974) further described content analysis as a very effective tool of analysis when researching what individuals think about a particular issue, because it allows the researcher to deal with responses to open-ended questions.

### Summary

Stereotyping is by no means new in American society; it has been found to be stable and widely shared among most people in the population. However, it has recently become a concern of educators and in particular vocational educators. The vocational educators' concern is deservedly placed, since many vocational programs in the past and even today tend to reinforce labor market patterns of sex-role stereotyping of occupations. Vocational education has been judged guilty of perpetuating sex-role stereotyping by reason of not attempting to eliminate it. In essence, the government has said that vocational education must not wait for society to change, but instead must effect change.

Much could and should be done to proactively eliminate the problems and attitudinal barriers to non-traditional males and females



in sex-typed vocational education programs. However, before educators can intelligently attempt to eliminate and minimize problems and concerns of non-traditional students, one must be sure that they are indeed problems for those individuals. The problems and concerns that are to be attacked should be those articulated by the students and not problems as perceived by others, for they may only be stereotypes of problems and concerns of non-traditional students in sex-typed vocational programs. By only seeking remedies for problems as perceived by others, educators potentially run the risk of treating problems that are not problems at all and/or overlooking other problem areas altogether.

Little research has dealt with the sex-role stereotyping in vocational-technical education from the perception of the student. Further research in the area should seek information helpful to the individual, teachers, counselors, and administrators who are interested in improving the future of the non-traditional student in sex-typed vocational programs.

From the review of literature, the problems students encounter can be classified into basically six broad categories: school related problems, curriculum and operational problems, peer problems, family related problems, problems with self, and other problems.

In order to investigate the problems students encounter in the above categories, the interview technique was most appropriate as the methodology for data collection. To analyze the raw data obtained from interviews, content analysis was recommended for the processing and quantification of meaningful data.

## CHAPTER 3

### Research Methodology

The focus of the research study was to determine the problems encountered by non-traditional students as a result of being enrolled in sex-typed vocational education programs in four school divisions serving a large metropolitan area, and to determine the extent of the problems and their impact on the student. This chapter is organized into six sections: (a) research design; (b) population; (c) instrumentation; (d) interview procedures; (e) analysis of data; and (f) summary.

#### Research Design

The design is exploratory field research with the interview technique being used to collect the data on problems and concerns that non-traditional students in sex-typed vocational education programs have. The exploratory field research method was chosen because the study specifically sought to identify the problems of non-traditional students in vocational programs. According to Kerlinger (1973), exploratory studies have three purposes: (a) to discover significant variables in the field situation; (b) to discover relations among variables; and (c) to lay the groundwork for later hypothesis testing. In addition to discovering the variables that the students consider to be problems or concerns, the data obtained through this research study

could serve as a preliminary to the study of relationships or hypothesis-testing.

A structured interview schedule utilizing closed- and open-ended questions was used as the data collection medium in the study. This approach assured that each respondent was asked the same questions in a like manner. Furthermore, the open-ended questions invited the respondents to reply in their own words, rather than limit them to responses of predetermined, narrow categories which might be found in a mail questionnaire survey instrument. The personal interview technique permitted greater depth and more complete data necessary for a comprehensive understanding of the problems and concerns of non-traditional students in sex-typed vocational education programs.

### Population

Non-traditional students enrolled in sex-typed vocational education programs at four school divisions in a large metropolitan area were selected as the population for the study. These four school divisions are located in four cities comprising a large metropolitan area with a total population in excess of 700,000 with approximately 75% of the population white and 25% black. The four cities are all closely interrelated socially and economically and house many major industries. Services is the largest industry followed by wholesale and retail trade and manufacturing. A labor analysis of the metropolitan area reveals that the radius of labor drawing extends throughout the entire area. Major industries and employment distribution show skilled workers in high demand followed by clerical and then semi-skilled

workers; unskilled workers are in low demand in the area (Virginia Employment Commission, 1979).

Three of the four school divisions have five high schools each with vocational programs in them. Two of those three also have a vocational-technical center, and the third school division has a comprehensive high school which concentrates on meeting the vocational-technical needs of the students. The fourth school division has six high schools and a vocational-technical center. Three of the four school divisions serve approximately 25,000 to 30,000 students each and the fourth division serves approximately 55,000 students.

Those vocational programs in which the enrollment reflected 25% or fewer of either sex were identified at each of the secondary and vocational-technical schools in the four divisions. In the case of industrial cooperative training, the sex composition at the place of training determined the traditional or non-traditional status of the student. After the sex-typed programs were identified at each school, all non-traditional students were requested to serve as participants in the research study.

Permission to conduct the research study was requested of all four school division superintendents and/or the research directors and permission was granted by all divisions. Permission then was requested and granted by all principals of schools where sex-typed programs existed to interview the non-traditional students in those programs. In some schools, a letter requesting parental or guardian permission to interview the non-traditional student was required. Once all necessary interview permission had been received, the interview time and place was established, and the interview was conducted.

A total of seventy-one non-traditional students were identified in the four school divisions. Sixty-eight of those non-traditional students were interviewed. Three students were unable to be interviewed; one student did not want to be interviewed and the other two missed three scheduled interview appointments made with them.

### Instrumentation

An interview schedule was used as the data collection instrument in the study. The instrument lists the questions that were asked and the sequence in which they were presented during the interview.

The interview schedule was developed by using relevant literature of the topic as a basis for questions to be asked. It was then reviewed by a jury of four experts consisting of two vocational-technical education specialists, one educational research specialist, and one independent research specialist with expertise in sex-role stereotyping in order to establish content validity and to evaluate the structure of the interview schedule, i.e. vocabulary level, format, etc. (The list of the jury of experts and the interview schedule are included in Appendix A.)

In addition, the interview schedule was pilot tested in an urban school division with 16 non-traditional students enrolled in sex-typed vocational programs. The school division used in the pilot testing of the instrument was similar in make-up to the four school divisions used in the study and close in proximity to the cities in the research study. Consequently, this city also shares like industries and labor market needs and is somewhat interrelated with the cities used in the study. The purpose of conducting the pilot test

in a similar school division was to further establish content validity and to evaluate the structure of the interview schedule.

Revisions made to interview schedule. Suggestions made by the two jury members in vocational-technical education were incorporated in the interview schedule. As a result of their suggestions, changes were made in the wording of the instrument to eliminate ambiguities, inadequate wording, and to simplify the vocabulary used.

After the review by the two vocational-technical education experts, the instrument was piloted in an urban school division with five students initially. After interviewing the first five students, it was apparent that further revisions were required to clarify meaning and to simplify vocabulary. Changes were implemented in the interview schedule and then piloted with eleven more students. The results of the last pilot test were favorable in revealing specific problems encountered and the students' assessments of those problems.

After the pilot testing of the instrument, it was reviewed by an educational research specialist. The suggestion was made to include in the introductory remarks to the respondent a statement that would explain that there are no right or wrong answers to the questions. This suggestion was added to the introductory remarks. One additional comment was made in regard to answers to questions of whether or not the student encounters any problems. If the student should answer "not particularly" or "not really," it was suggested that the interviewer wait for a moment, allowing the student to rethink the answer, and then probe if necessary by asking if that means "yes" or "no." It was the opinion of the educational research specialist that the

instrument was adequately and appropriately constructed and no other changes were needed.

Finally, an independent research specialist with expertise in sex-role stereotyping was consulted to help in determining the content validity of the instrument. It was suggested that the question dealing with why the student is enrolled in the vocational program be changed to a closed-end question of whether the student is enrolled in the program for personal use and interest or for occupational pursuits and interests. Personal experience of one of the jury members revealed that students who are occupationally oriented take their studies in non-traditional programs more seriously and may as a result report more concerns and difficulties. Further revisions for simplifying the vocabulary used were also suggested. Finally, it was suggested that the students be asked at the end of the interview if they have any suggestions they would like to make that would help them with their concerns and problems. All of the above suggestions were considered as valid and were implemented. It was the opinion of the independent research specialist and staff that the categories of problems were appropriate and that all potential problem areas had been covered in each category.

Summary. The interview itself contained open-ended and closed-ended questions in order to allow flexibility in the interviewee's answers. Since the open-ended questions had no predetermined response categories, the respondent was required to answer independently. If from the open-ended question a problem or concern was verbalized, then a question followed to determine the degree of concern the respondent

had for that particular problem. This question format allowed for the feelings of the respondent to be assessed.

### Interview Procedures

Identical procedures were followed in conducting each interview. The researcher served as the interviewer for each interview and asked each question on the interview schedule the same way and in a like manner.

Recording the data. An audio tape recorder was used to record answers to the questions by the respondents, since research strongly recommends that answers be recorded exactly as given when using open-ended questions (Gorden, 1966). Each interview was recorded on a separate cassette tape. At the conclusion of each interview, the tape was tested to verify the clarity of the recording.

Location and setting for interviews. Each interview was conducted in the school setting in a private room free from distractions. Attempts were also made to avoid visual or auditory distractions which would make concentration difficult for the interviewer and the respondent.

The interview length obviously varied; but as the pilot test revealed, the interviews took approximately 20 to 30 minutes. This time frame was well within the recommended 45 minute maximum (Miller, 1970).

Individual arrangements were made with the principals and/or teachers in conjunction with the student involved to set aside time for the interview to be conducted and to assure an adequate setting



for the interview. Interview information was obtained on the basis of a pledge that names of individuals and schools would remain anonymous. A coding procedure was used for identification purposes while still allowing participants to remain anonymous. Each school division was assigned a Roman numeral with each school being assigned an alphabetical letter, i.e., IA which means school "A" in school division "I." Then each respondent was assigned an Arabic number which caused the coding process to resemble IA1, IA2, IA3 at a particular school for different interviews. The Roman numeral, alphabetical letter, and Arabic number can then be used when referring to direct quotes or comments made by the respondent.

Interview format. The interview agenda began with: (a) the code numbers; (b) the sex of the interviewee; (c) the racial/ethnic description of the interviewee; and (d) the name of the vocational program. All of the information was recorded on tape before the interviewee arrived for the interview.

Once the interviewees arrived and introductions had been made an explanation of the research and its purpose were given. Emphasis was placed on their perceptions and actual experiences. The interviewees were informed that their identities would remain confidential. Further, the interviewees were asked to freely express their opinions.

#### Analysis of Data

Transcripts were typed from the audio tapes recorded during each interview. The transcripts then served as the source of data for the content analysis procedures to be used. Content analysis was

selected because of its appropriateness for processing data derived from open-ended questions, such as those used in the interview schedule (Hutt, 1975).

Validation of data. Since the researcher read narrative comments of respondents and produced possible categories or grouped the responses into categories, there was a need to reduce any possible research bias so that it would not influence the findings of the study. One possible way to reduce bias is to use a validation or checking procedure on the researcher's analysis of the data. Hence, an independent individual was asked to perform the same analysis as the researcher, then the two findings were compared. If they did not differ, the researcher used her analysis. If there was a difference in the researcher's analysis and the independent one, then a second independent opinion was sought to determine what should be reported.

The accuracy of the researcher's content analysis was measured by individuals who are experienced vocational-technical educators with the approval and recommendation of the research advisor. The individuals were asked to review the transcripts recorded by the interviewer. After reading a transcript, each judge then completed content analysis of the interview. The content analysis was then compared to the content analysis completed by the investigator.

Coding process. A coding process was selected whereby the raw data were systematically transformed and aggregated into units which permitted precise descriptions of relevant content characteristics. The rules by which this transformation was accomplished served

as the operational link between the research data and the research questions; hence, coding rules were a central part of the research design. The researcher established the following guidelines for analysis:

1. The problem was defined in terms of six topic areas.
2. The six topic areas were further classified and defined to include twenty-one theme categories to which all questions correspond.
3. The theme categories were selected as the unit of content to be used to classify the data.
4. Every problem or concern expressed by a respondent of a given theme was specified and tallied.
5. A frequency count of theme categories was used as the method for measuring the characteristics of the content.
6. The theme category was also given an overall assessment by the respondent.
7. The assessment of the theme category was used as the basis for measuring the degree of concern for each topic area.

The universe of the content analyzed consisted of all replies from the respondents to the questions dealing with their perceptions regarding the problems and concerns they encountered as a result of being enrolled in a sex-typed vocational program. Twenty-one theme categories were defined following Holsti's (1969) principles for category construction. Each theme category reflected the purpose of the research, was exhaustive, was mutually independent, and was derived from a single classification principle. An example of a topic area in

this study would be "school related problems" with one of its theme categories being "male/female teachers of the program."

The unit of content selected for study was the theme category. A theme was identified as a sentence, or an assertion about the subject matter. The theme may have been expressed in a phrase or several sentences. In content analyzing various responses, different respondents were sometimes credited with eliciting the same problem or theme under a particular theme category, even though the responses were not made in the same words.

The method of measuring the characteristics of content for this study was frequency count. In the frequency count, the theme category was coded as one unit when problems or themes were reported for that theme category. Then all units for each topic area were counted and overall percentages of the number of problems reported for each topic area were calculated.

The questions on the interview schedule which asked the respondent to determine whether the problem(s) was/were of minor, moderate, or major concern were also reported and used as a method of measurement. Problems assessed for each theme category as being minor received one unit, moderate received two, and major received three. All assessments of each theme category were added together and divided by the number of respondents reporting problems in each category to arrive at an overall degree of concern for each topic area. Finally, the overall degree of assessment for each theme category under each topic area were added together and divided by the number of theme

categories in each topic area to determine the degree of overall concern expressed in each topic area.

Six topic areas were established based on the review of literature by the researcher: (a) school related problems; (b) curriculum and operational problems; (c) peer problems; (d) family related problems; (e) problems with self; and (f) other problems. Theme categories were then determined based on literature of problems encountered by students in non-traditional programs for each of the six topic areas. (See Table 1 on pages 65 and 66.)

The interviewee was also asked what had been the greatest problem or concern they had had to face. A frequency count was made of these problems on the basis of theme categories and the topic areas in which these theme categories belong and percentages were reported for the theme categories and topic areas. Finally, the interviewee was asked for suggestions and all suggestions made were reported as a frequency count and as a percentage of respondents making that suggestion.

### Summary

This chapter has presented the research procedures and methods used to determine: (a) the problems encountered by non-traditional students in vocational programs in four school divisions in a large metropolitan area; (b) the respondent's assessment of the problems they had encountered; and (c) the greatest problem they had encountered. This chapter specifically reported:

Table 1

## Topic Areas and Theme Categories

Topic Areas	Theme Categories
School Related Problems	Male/female teachers of the program Other teachers on the faculty Lack of male/female teachers in program Guidance counselor's attitude toward enrollment Guidance counselor's assistance with problems Administrators Special needs Resource materials depicting males/ females in sex-typed roles
Curriculum and Operational Problems	Lack of preparation in certain subjects Familiarity with equipment and language used in program Equipment and tools in program Physical ability to accomplish work

Table 1 (Continued)  
 Topic Areas and Theme Categories

Topic Areas	Theme Categories
Peer Problems	Students of opposite sex in program Students of opposite sex not in program Students of same sex
Family Related Problems	Parents or guardians Siblings Spouse
Problems With Self	Feelings of isolation Feelings of inadequacy or inferiority
Other Problems	To be determined by the respondent

1. The exploratory field research design was selected as the most appropriate method to determine the problems non-traditional students in vocational programs encounter.
2. Four school divisions in a large metropolitan area were used in the population to determine the problems students encounter.
3. A structured interview schedule utilizing open- and closed-ended questions was used as the data collection medium in the study.
4. The review of the interview schedule made by a jury of experts and the results of the pilot test were reported.
5. Identical procedures followed in conducting the interviews were described.
6. The interview validation procedures utilized to validate the accuracy and the reliability of the content analysis were reviewed.
7. Content analysis procedures utilized to code the data from the transcripts typed from audio tapes recorded during each interview were delineated.



## Chapter 4

### Analysis of the Data

The central problem of this study was to identify problems which non-traditional students enrolled in sex-typed vocational education programs in four school divisions in a large metropolitan area have encountered as a result of such enrollment and the impact of those problems on the student. Specifically, 68 of the 71 total non-traditional students enrolled in sex-typed vocational education programs in four school divisions serving a large metropolitan area were interviewed. Structured interviews were conducted with the 68 non-traditional students, and content analysis procedures were used to analyze the information obtained.

The chapter is divided into three sections. The first section consists of a profile of non-traditional students participating as respondents in the research study. The following section contains a presentation of the content analysis made on the responses of interview participants to questions one through twenty-two on the interview schedule. Finally, the last section contains a summary of the analysis of the data.

#### Profile of Participants

The background characteristics of participants in the study include: (a) sex; (b) race; (c) age; (d) vocational education program enrollment; (e) number of years enrolled in the vocational education

program; and (f) primary reason for enrollment in the vocational education program.

Sex. Forty-five females and twenty-three males were interviewed. Three additional non-traditional males were part of the total population in the four school divisions but were unavailable for interviewing.

Race. Thirty-five of the participants were black and thirty-three were white. Of the three non-traditional males not interviewed, two were black and one was white.

Age. Two students were 15 years old; twenty-two were 16; twenty-seven were 17; eleven were 18; and six were 19. Seventy-two percent of the students interviewed were 16 or 17 years old.

Vocational education program enrollment. Five secondary vocational education programs in the four school divisions were found to be sex-typed. Table 2 shows that agriculture education had four non-traditional female students; business had fifteen non-traditional males; health occupations had one non-traditional male; home economics had seven non-traditional males; and trade and industrial had forty-one non-traditional females. The three non-traditional males not interviewed were in business education programs.

Number of years enrolled. In response to the question of how long the student had been in the program, answers varied from one to four years. Forty-six non-traditional students had been in the vocational education program for one year; sixteen students had been in the program for two years; four students had been in the program for three years; and two students had been in the program for four years.

Table 2

## Participants' Program Enrollment

Program Enrollment	Number of Students	Sex of Students
Agriculture Education	4	female
Business Education	15	male
Health Occupations Education	1	male
Home Economics	7	male
Trade and Industrial Education	41	female
<u>N</u> = 68		

Primary reason for employment. Non-traditional students were asked if they were enrolled in the vocational program primarily for their personal interest and use or for employment in the field. A few respondents answered by saying they were in the program for both reasons. In these cases, the respondent's answer was tabulated as being for employment, since the reason for asking the question was to distinguish between those students who had plans to seek employment in the field from those who did not. Fifty-seven students indicated they were going to seek work in the field, and eleven indicated the only reason they were in the program was for their own personal use and interest.

#### Content Analysis

Content analysis procedures made it possible to identify the problems encountered by a group of non-traditional students from the closed- and open-ended questions on the interview schedule (Appendix A). Questions one through twenty-one on the interview schedule were identified as theme categories. Responses stating problems encountered by the students were coded as themes under each of the theme categories and each of the theme categories were classified under one of the six topic areas. After the content analysis had been conducted, independent reviewers were asked to double check the researcher's analysis.

The degree of the non-traditional students' concern about the problems they verbalized was also assessed for each theme category. Then all assessments for theme categories under each topic area were combined to reach an overall degree of concern for each of the six topic areas.

Topic areas. The overall degree of concern for the six topic areas: (a) school related problems; (b) curriculum and operational

problems; (c) peer problems; (d) family related problems; (e) problems with self; and (f) other problems was calculated (Table 3). In order to arrive at the overall degree of concern for each of the topic areas, the overall degree of concern for each of the theme categories in each topic area was added together and divided by the number of theme categories in that area. The mean score was then rounded to the nearest integer and reported as the overall degree of concern for the topic area for purposes of discussion. The standard deviation was also calculated for each topic area mean for further insight into the dispersion around the mean. Furthermore, the average percentage of respondents reporting problems in each category was reported.

Two topic areas, school related problems and family related problems, had an overall degree of concern of one which means that they were of minor concern to the non-traditional students interviewed. Five topic areas were assessed as being of moderate concern with an overall degree of concern of two: (a) curriculum and operational problems; (b) peer problems; (c) family related problems; (d) problems with self; and (e) other problems.

Larger numbers of non-traditional students reported problems in the following topic areas: (a) problems with self (45%); (b) peer problems (33%); and (c) curriculum and operational problems (24%) than in the other areas. On the other hand, fewer non-traditional students reported problems under these topic areas: (a) school related problems (17%); (b) other problems (13%); and (c) family related problems (11%).

Theme categories. Each theme category corresponds to each of the questions on the interview schedule. Theme categories were

Table 3

## Problems Encountered in Each Topic Area

Interview Question Numbers	Topic Areas	% of Respondents Reporting Problems	$\bar{X}$ (SD)	Overall Degree of Concern*
1-8	School Related Problems	17	1.40 (0.70)	1
9-12	Curriculum and Operational Problems	24	1.70 (0.80)	2
13-15	Peer Problems	33	1.61 (0.89)	2
16-18	Family Related Problems	11	1.45 (0.67)	1
19-20	Problems with Self	45	1.73 (0.83)	2
21	Other Problems	13	2.11 (0.93)	2

\*Figures were rounded to nearest integer.

preestablished and questions one through twenty on the interview schedule were devised to directly correspond with each theme category. Question twenty-one asked the interviewees if they had encountered any other problems not mentioned in the interview. Employment was the theme category created by the researcher from the other problems or themes mentioned by the respondents (see themes for question 21 in Appendix B).

Each theme category for which a problem or theme was reported by a non-traditional student was then given an assessment of minor, moderate, or major concern by the respondent. Minor concerns were calculated as one unit; moderate as two; and major as three. The degree of concern for each theme category was calculated and totaled on this basis. The total was then divided by the number of respondents reporting problems and rounded to the nearest integer in each theme category to arrive at the overall degree of concern shown on Table 4. Once again, the mean score and standard deviation was also calculated and reported.

Question five asked the interviewees who had gone to a guidance counselor with problems or concerns encountered as a result of being enrolled in a sex-typed program if they had any complaints about the guidance they received. No problems were reported for this theme category. Seven categories were calculated to be of minor concern overall by respondents reporting problems in those categories. Of minor overall concern were problems related to: (a) other teachers on the faculty; (b) counselors' attitude toward enrollment; (c) administrators; (d) resource materials; (e) physical ability to accomplish work; (f) students of the opposite sex not in the program; and (g) siblings. Thirteen of the twenty-one theme categories were calculated to be of moderate overall

Table 4

## Problems Concerning Each Theme Category

Interview Question Number	Theme Categories	% of Respondents Reporting Problems	$\bar{X}$ (SD)	Overall Degree of Concern*
1	Teachers of the Program	12	1.88 (0.99)	2
2	Other Teachers on the Faculty	9	1.00 (0.00)	1
3	Lack of Male/Females Teachers in Program	28	1.58 (0.84)	2
4	Counselors' Attitude Toward Enrollment	7	1.40 (0.89)	1
5	Counselors' Assistance with Problems	--	-- --	--
6	Administrators	1	1.00 (0.00)	1
7	Special Needs	10	1.57 (0.98)	2
8	Resource Materials	71	1.23 (0.59)	1



Table 4 (Continued)

## Problems Concerning Each Theme Category

Interview Question Number	Theme Categories	% of Respondents Reporting Problems	$\bar{X}$ (SD)	Overall Degree of Concern*
9	Lack of Preparation in Certain Subjects	38	1.77 (0.86)	2
10	Familiarity with Equipment and Language Used	43	1.69 (0.81)	2
11	Equipment and Tool Utilization	4	2.33 (1.15)	2
12	Physical Ability to Accomplish Work	12	1.25 (0.46)	1
13	Students of Opposite Sex in Program	44	2.00 (0.96)	2
14	Students of Opposite Sex Not in Program	28	1.11 (0.46)	1
15	Students of Same Sex Not in Program	26	1.50 (0.86)	2
16	Parents or Guardians	18	1.67 (0.78)	2

Table 4 (Continued)

## Problems Concerning Each Theme Category

Interview Question Number	Theme Categories	% of Respondents Reporting Problems	$\bar{X}$ (SD)	Overall Degree of Concern*
17	Siblings	13	1.11 (0.33)	1
18	Spouse	1	2.00 (0.00)	2
19	Feelings of Isolation	65	1.61 (0.75)	2
20	Feelings of Inadequacy or Inferiority	24	2.13 (0.96)	2
21	Employment	13	2.11 (0.93)	2

\*Figures were rounded to the nearest integer.

degree of concern. These were problems or concerns related to: (a) teachers of the program; (b) lack of male/female teachers in program; (c) special needs; (d) lack of preparation in certain subjects; (e) familiarity with equipment and language used; (f) equipment and tool utilization; (g) students of opposite sex in program; (h) students of same sex not in the program; (i) parents or guardians; (j) spouse; (k) feelings of isolation; (l) feelings of inadequacy of inferiority; and (m) employment.

In addition to showing the overall degree of concern the respondents had for each theme category, Table 4 also shows the percentage of respondents reporting problems in each of the theme categories. Only one respondent reported no problems at all as a result of being enrolled in a sex-typed program. One respondent was married and reported a problem under the "spouse" theme category. One respondent only reported problems concerning the theme category "administrators." On the other hand, 71% of the respondents encountered problems or concerns relating to "resource materials" and 65% encountered problems or concerns relating to "feelings of isolation." A more detailed breakdown of the percentage of respondents reporting problems for each theme category is shown on Table 4.

Themes. The number of themes in a theme category was determined by the number of different problem responses made by each respondent in each category. The various problem statements made by the respondents in each theme category were then stated in uniform themes by the researcher (Appendix C). These themes were derived through content analysis from the responses of interview participants to questions one through twenty-one on the interview schedule concerning problems or concerns faced by non-traditional students.

Question 23 asked for suggestions that the student might have for helping non-traditional students in sex-typed programs. The suggestions made were also analyzed into a uniform list of themes for question 23 (Appendix C).

All themes reported by the researcher for each respondent were then double checked by an independent reviewer. The reviewer was asked to read the interview question, then read the respondent's answer, and select from a list of themes for each theme category the theme or themes they felt most appropriately corresponded to the respondent's answer. Finally, they were asked to compare their content analysis with the researcher's original analysis and note any differences in the two. Reviewers were also requested to feel free to make suggestions for rewording the theme statements.

Analysis of reviewers. Two of the four content analysis reviewers reported that they agreed with the researcher's content analysis and had no suggestions to make to improve the wording of the researcher's theme statements. The two other content analysis reviewers agreed with the researcher's content analysis and suggested that the wording of certain theme statements be improved. As a result of the reviewers suggestions, the wording of some of the theme statements were made more clear. (Appendix B, Letters from Analysis Reviewers and Content Analysis).

Greatest problems or concerns. The number and the percentage of respondents reporting problems or concerns under each topic area (Table 5) and in each theme category (Table 6) which were of greatest concern to them were reported. These responses were obtained from question 22 on the interview schedule (Appendix B) which asked the students which of

the problems or concerns they had mentioned in the interview had been the greatest problem or concern they had encountered as a result of being enrolled in a sex-typed program. Since one respondent did not report having any problems or concerns, the totals on Tables 5 and 6 equal sixty-seven for the number of respondents and 98% for the respondents reporting problems.

Three topic areas had high percentages of respondents reporting problems being of the greatest concern to them: (a) school related problems, 26%; (b) peer problems, 24%; and (c) problems with self, 22%. Curriculum and operational problems were in the middle with 16% of the respondents reporting them as their greatest concern. Other problems with 7% and family related problems with 3% were low.

Theme categories give a more detailed picture of the problem or concerns identified by respondents as being their greatest problems or concerns (Table 6). Three theme categories had relatively high percentages: (a) students of opposite sex in program, 18%; (b) resource materials, 15%; and (c) feelings of isolation, 15%. On the other hand, six theme categories in which no respondents considered to be their greatest problem or concern included: (a) lack of male/female teachers in programs; (b) counselors' attitude toward enrollemnt; (c) counselors' assistance with problems; (d) administrators; (e) siblings; and (f) spouse. A more detailed picture of theme categories of greatest problems or concerns identified by non-traditional students is shown in Table 6.

### Summary

The chapter presented the analysis of the data obtained from interviews of non-traditional students enrolled in sex-typed secondary

Table 5

Topic Areas With the Greatest Problems or Concerns

Topic Areas	<u>N</u>	% of Respondents Reporting Problems*
School Related Problems	18	26
Curriculum and Operational Problems	11	16
Peer Problems	16	24
Family Related Problems	2	3
Problems with Self	15	22
Other Problems	5	7
Totals	67**	98**

\*Figures were rounded to the nearest integer.

\*\*One of the sixty-eight students did not report any problems.

Table 6

## Theme Categories of Greatest Problems or Concerns

Theme Categories	<u>N</u>	% of Respondents Reporting Problems*
Teachers of the Program	4	6
Other Teachers on the Faculty	2	3
Lack of Male/Female Teachers in Program	0	0
Counselors' Attitude Toward Enrollment	0	0
Counselors' Assistance with Problems	0	0
Administrators	0	0
Special Needs	2	3
Resource Materials	10	15
Lack of Preparation in Certain Subjects	1	1
Familiarity with Equipment and Language Used	7	10

Table 6 (Continued)

## Theme Categories of Greatest Problems or Concerns

Theme Categories	<u>N</u>	% of Respondents Reporting Problems*
Equipment and Tool Utilization	2	3
Physical Ability to Accomplish Work	1	1
Students of Opposite Sex in Program	12	18
Students of Opposite Sex Not in Program	2	3
Students of Same Sex Not in Program	2	3
Parents or Guardians	2	3
Siblings	0	0
Spouse	0	0
Feelings of Isolation	10	15



Table 6 (Continued)

Theme Categories of Greatest Problems or Concerns

Theme Categories	<u>N</u>	% of Respondents Reporting Problems
Feelings of Inadequacy or Inferiority	5	7
Employment	5	7
Totals	67**	98*

\*Figures were rounded to the nearest integer.

\*\*One of the sixty-eight students did not report any problems.

vocational education programs about the problems they encountered as a result of their enrollment. A profile of the participants in the study, was given along with a detailed description of the findings of the content analysis of the data.

To analyze the data for the research question of what problems these students encountered, problems were reported according to theme categories and topic areas. Data were also analyzed to determine the extent of the non-traditional students' concern about the problems they encountered according to theme categories and topic areas. Finally, findings were reported on the greatest problems or concerns encountered by non-traditional students in sex-typed programs by theme categories and topic areas.

## Chapter 5

### Conclusions, Discussion, and Recommendations

In the investigation of the problems encountered by non-traditional students enrolled in secondary vocational education programs, research questions were formulated regarding: (a) the problems encountered by non-traditional students as a result of being enrolled in sex-typed vocational education programs; (b) the extent of the non-traditional students' concern about problems they encountered; and (c) the greatest problems or concerns encountered by non-traditional students. This chapter addresses the conclusions derived from the analysis of data presented in Chapter 4, the discussion of relevant information and implications of findings, and recommendations made by students and the researcher.

#### Conclusions

Content analysis of the transcripts of interviews with 68 non-traditional students enrolled in vocational programs in four school divisions in a large metropolitan area identified 20 theme categories of problems out of 21 possible theme categories. (No problems were reported for the theme category "counselors' assistance with problems.") The 20 theme categories or problems consisted of 67 different themes which were reported by respondents. The following conclusions were drawn based upon the analysis of responses of non-traditional students in the study:

1. Only 17% of the students reported problems in the topic area "school related problems," and the overall degree of concern was minor (Table 3). Hence, it is concluded that the non-traditional students in the study are not very concerned with school related problems.

2. The topic area "family related problems" only had 11% of the respondents reporting problems or concerns in the area and had an overall degree of concern of minor (Table 3). However, of the three theme categories under the topic area, "parents or guardians" and "spouse" had an overall degree of concern of moderate and "siblings" had an overall degree of concern of minor (Table 4). Consequently, the low degree of concern for the theme category "siblings" caused the mean to be low for the topic area. Further, only one student was married and reported a problem concerning "spouse." It is concluded that non-traditional students are more concerned with problems concerning "parents or guardians" than they are with "siblings."

3. No respondents reported problems in the theme category "counselors' assistance with problems," and only three students reported going to a counselor with problems related to their enrollment in a sex-typed program. The data obtained in the study, however, reveal that non-traditional students do encounter problems. Therefore, it is concluded that few non-traditional students seek the assistance of guidance counselors with problems they encounter in sex-typed programs.

4. When non-traditional students were asked to identify the greatest problem or concern they had encountered as a result of their enrollment in a sex-typed program, the greatest number of students reported problems under the topic area "school related problems." However,

school related problems were assessed as being of minor overall concern. Finally, ten of the eighteen students reporting school related problems as their greatest concern also assessed all their problems as being of minor concern. Therefore, it is concluded that school related problems were most often reported of greatest concern by students who did not attribute much concern to any problems they encountered.

5. Educators in the school setting with the non-traditional students were not cited as being the greatest problem or concern faced by the students. The theme categories "teachers of the program" and "other teachers on the faculty," were chosen by only six of the sixty-seven students reporting problems as being their greatest concern. The other theme categories including counselors and administrators were not mentioned by any respondents as presenting the greatest concern or problem to them. It is concluded, then, that based on this study educators within the school setting are not the greatest concern or problem of most non-traditional students.

### Discussion

Several points of interest should be noted that were discovered as a result of the research but not reported in the analysis of the data or necessarily obtained via the interviews.

Educators. One of the four school divisions was reluctant at first to grant permission for the study to be conducted because of the concern that the study would encourage non-traditional students to complain about their treatment by educators in the system. Several teachers of sex-typed programs also voiced some disapproval of having their students

interviewed. In some instances, the teacher volunteered problems they said they knew the student would mention which were related to them before the interview was conducted. Interestingly, the students always reported the problems the teachers mentioned in the interview under the theme category "teachers of the program."

Sexist attitudes were readily admitted and with some degree of pride by a few teachers of the sex-typed programs. In one situation, the teacher told the researcher that one non-traditional student was "okay," two were "tolerable," but three were "out of the question." One of the two students in this teacher's class when interviewed volunteered that there were five non-traditional students in the class at the beginning of the year but now there were only two.

In another situation, the male teacher of a predominantly male program did not vocalize any sexist attitudes but invited the researcher to use his office for the interview. The office had complete frontal nudes of women on every wall. Furthermore, the same office was also used as a tool storage room and all students utilized the office for this purpose. The interviews were conducted in the office and of the two students interviewed neither one mentioned the nudes on the walls of the office.

Students. Non-traditional males tended to be labeled as being homosexual or having homosexual tendencies; whereas, non-traditional females tended to be accused of wanting to be in the program to be around the males. A few females were labeled as being a "tomboy," but even these female respondents did not mention any homosexual overtones being attached to the label.

Non-traditional students in the vocational program for three and four years did not average fewer problems than students in the program only one or two years; furthermore, the assessment of the degree of concern the three and four year non-traditional students gave for the problems they encountered was not any less than the assessments given by one and two year non-traditional students. Consequently, the students who stay in the programs do not encounter fewer problems or necessarily attribute less importance to their problems and concerns.

Students in the sex-typed vocational programs primarily to seek employment in the field tended to have more problems than students in the program primarily for their own personal interest and use. Students planning to seek employment in the field also attribute more concern to the problems they face than the students in the program for their personal interest. Furthermore, a similar situation exists with the number of comrades non-traditional students have in the program with them. The more non-traditional students in the sex-typed program, the fewer problems they tend to report along with a lower degree of concern being placed on the problems they do encounter. On the other hand, just the reverse was true of respondents who were the only non-traditional student in the program.

Students were generally eager to talk about their problems and concerns. However, when asked to assess their degree of concern, some students seemed to give low assessments for peer problems. The reluctance on the students' part was not in talking about peer problems but in admitting the degree to which those problems concerned them. Some students would talk at length about their peer problems and then assess the

problems as minor or moderate and state that they did not "pay them any mind."

### Recommendations

Recommendations are presented in two sections: (a) recommendations for educators and (b) recommendations for further research.

Recommendations for educators. Educators and guidance counselors should be aware of the various problems faced by non-traditional students enrolled in vocational education programs. The information obtained through the study can be used to help and counsel students before and after their enrollment in a sex-typed program. It is particularly important for guidance counselors to be aware of the concerns and problems of non-traditional students so that they can begin to take steps in helping the students deal with those concerns and problems. The data obtained in the study clearly reveal that non-traditional students are encountering problems as a result of their enrollment in sex-typed vocational programs but are not seeking the help of guidance counselors with those problems. Hence, counselors need to go to non-traditional students offering support, encouragement, and guidance.

Question 23 on the interview schedule asked the non-traditional students if they would like to make any suggestions to counselors, teachers, or administrators that would help in minimizing and/or eliminating the concerns and problems they had mentioned in the interview. Eighteen different themes were mentioned by the respondents and are listed in Appendix C under question 23. The researcher feels the three themes most often mentioned by the respondents deserve special



consideration by educators:

1. Educators should encourage potential non-traditional students to consider taking sex-typed vocational programs.
2. Educators should treat all students regardless of sex as equals.
3. Educators should offer encouragement and support to non-traditional students in sex-typed programs.

Many of the suggestions made by the non-traditional students reflect a great deal of thought and are excellent suggestions for educators to take into consideration to help non-traditional students and improve the programs in which they are enrolled. The suggestions were not directed only to teachers but to administrators and counselors as well. The students' suggestions indicate a desire on their part for more action to be taken by educators to address the problems they encounter as a result of being enrolled in sex-typed programs.

Specifically the researcher recommends the following:

1. Sexist language should be eliminated from use in the classroom by teachers and in resource materials.
2. Educators should attempt to reduce depicting or reinforcing sex-typed roles in society.
3. Role models should be utilized to lend support and encouragement to non-traditional students.
4. School divisions should devise a plan of action seeking to help non-traditional students to deal with their problems and concerns.
5. Non-traditional female students should be provided an equally convenient place to change clothes as the male students have.

6. Non-traditional male students should be provided desks and chairs which can comfortably accommodate their size.

7. Industrial arts courses should be offered during the summer, and potential non-traditional female students should be encouraged to take the classes before going into sex-typed programs in which the related skills are used.

8. Home economics courses should be offered during the summer, and potential non-traditional male students should be encouraged to take the classes before going into sex-typed programs in which the related skills are used.

9. Educators should encourage traditional students to accept the presence of non-traditional students in sex-typed fields of work.

10. Guidance counselors should provide opportunities for non-traditional students to share their experiences in the sex-typed programs with each other in order to facilitate a support system.

Finally, now that the problems of non-traditional students are known along with their degree of concern for those problems, the data from the study can be used to plan and implement inservice programs and workshops for educators. The inservice programs and workshops should not only inform educators about the problems faced by these students, but should attempt to initiate affirmative action plans to assist non-traditional students.

Recommendations for further research. The researcher recommends that a change be made to the interview schedule before it is used again. Themes reported by respondents to question 21 which asked the students if they had encountered any other problems or concerns which had not

been mentioned already in the interview revealed the need for additional questions. All the themes reported for question 21 dealt with employment problems and concerns (see themes for question 21, Appendix C); therefore, questions should be developed to investigate concerns and problems which are related to employment.

The theme statements obtained from the interview questions 1 through 21 can be utilized to develop a more closed-ended interview format for further research studies. A questionnaire can also be devised by using these theme statements when more research is conducted to investigate problems encountered by non-traditional students. In this way, more students could be questioned about the concerns and problems they are encountering.

## REFERENCES

## REFERENCES

- Abramowitz, S., Weitz, L., Schwartz, J., Amira, S., Gomes, B., and Abramowitz, C. Comparative counselor inferences toward women with medical school aspirations. Journal of College Student Personnel, 1979, 16, 128-130.
- Anderson, W. F., and Bosworth, D. L. A note on occupational values of ninth-grade students of 1958 as compared to 1970. Journal of Vocational Behavior, 1971, 1, 301-303.
- Austin, H. Career development of girls during the high school years. Journal of Counseling Psychology, 1968, 15, 536-540.
- Barnett, R. The relationship between occupational preference and occupational prestige: a study of sex differences and age trends. Paper presented at a meeting of the American Psychological Association, Montreal, Canada, August, 1973.
- Barnett, R. C., and Baruch, G. Occupational and educational aspirations and expectations: a review of empirical literature. A paper funded under a contract from the National Institute of Health, Education, and Welfare, 1974.
- Baruch, G. The motive to avoid success and career aspirations of fifth and tenth grade girls. Paper presented at meeting of the American Psychological Association, Montreal, Canada, 1973.
- Beardslee, D. C., and O'Dowd, D. D. The college student image of the scientist. Science, 1961, 133, 997-1001.

- Beardslee, D. C., and O'Dowd, D. D. College student images of key occupations. Paper read at the Annual Convention of the American Psychological Association, 1959.
- Boynton, P. The vocational preferences of school children. Journal of Genetic Psychology. 1936, 49, 411-425.
- Campbell, R. E., and Parsons, J. L. Readiness for vocational planning in junior high school: a socio-economic and geographic comparison. Journal of Vocational Behavior, 1972, 2, 401-417.
- Carmody, J. F., Fenske, R. H., and Scott, C. S. Changes in goals, plans, and background characteristics of college bound high school students. American College Testing Research Report #52 Iowa City, Iowa, 1972.
- Chesler, P., and Goodman, E. J. Women, money, and power. New York: William Morrow and Company, Inc., 1976, 238.
- Clark, E. T. Influence of sex and social class on occupational preference and perception. Personnel and Guidance Journal, 1967 45, 440-444.
- Deutsch, M. Minority group and class status as related to social and personality factors in scholastic achievement. Monographs of the Society for Applied Anthropology, 1960, #2.
- Dipboye, W. J. and Anderson, W. F. The ordering of occupational values of high school freshman and seniors. Personnel and Guidance Journal, 1959, 38, 121-124.
- Douglas Commission Report. The massachusetts commission on: industrial and technical education. Boston, 1906, 20.

- Duncan, O. D., Featherman, D. L. and Duncan, B. Socioeconomic background and achievement. New York: Seminar Press, 1972.
- Eliason, N. C. Women in community and junior colleges. Report of a study on access to occupational education. American Association of Community and Junior Colleges, Washington, D. C. American Association of Women in Community and Junior Colleges, 1977.
- Epstein, C. G. Positive effects of the multiple negative: explaining the success of black professional women. American Journal of Sociology, 1973, 78, 912-935.
- Farmer, H. S. Career counseling for the lower social class and women. The Personnel and Guidance Journal, April 1978, 56, 467-471. (a)
- Farmer, H. S. Counseling programs and services for adult women in non-traditional occupations. The National Center for Research in Vocational Education, Ohio State University, 1978. (b)
- Farmer, H. S., and Backer, T. New career options for women: a counselor's sourcebook. New York: Human Sciences Press, 1977.
- Federal register. Volume 40, Number 108, June 4, 1975, 24-28.
- Flanagan, J. C. Project talent: the american high school student. Pittsburgh: University of Pittsburgh Press, 1964.
- Gallup, G. Qualitative measurement of public opinion: the quintamensional plan of question design. Princeton: American Institute of Public Opinion, 1947.
- Gandy, G. L. Birth order and vocational interest. Developmental Psychology, 1973, 9, 406-410.

- Gray, S. The vocational preferences of negro school children. Journal of Genetic Psychology, 1944, 64, 239-247.
- Grave, P. B. (Ed.) Webster's third international dictionary.  
Springfield: G. & C. Merriam Company, Publishers, 1969.
- Gorden, R. L. Interviewing: Strategy, techniques, and tactics.  
Homewood: The Dorsey Press, 1966.
- Gunn, B. Children's conceptions of occupational prestige. Personnel and Guidance Journal, 1963, 42, 558-563.
- Henning, M. Family dynamics for developing positive achievement motivation in women: the successful woman executive. In R. B. Kundsinn (ed.), Successful women in the sciences: an analysis of determinants. Annals of the New York Academy of Sciences, 1973, 208, 91-97.
- Holsti, O. R. Content analysis for the social sciences and humanities.  
Menlo Park: Addison-Wesley Publishing Company, 1969.
- Horner, M. Toward an understanding of achievement related conflicts in women. Journal of Social Issues, 1972, 28, 157-176.
- Hutt, R. W. "Perceptions of employers regarding cooperative distributive education programs at the secondary level." Unpublished doctoral dissertation, Michigan State University, 1975.
- Hyman, H. H. with Cobb, W. J.; Feldman, J. J.; Hart, C. W.; and Stember, C. H. Interviewing in social research. Chicago: The University of Chicago Press, 1970.
- Iglitzin, L. B. A child's eye view of sex roles. Today's Education, 1972, 61, 23-25.



Indiana State Board of Vocational and Technical Education's Report on:  
Sex as a determinant in vocational choice, June 1977.

Jackson, D. W., Jr.; Grikscheit, G. M.; and Crissy, W. J. E. Content analysis of marketing communications. Unpublished faculty paper at the authors' respective institutions of Arizona State University, University of Utah, and Michigan State University, 1974.

Jenson, P. G., and Kirchner, W. K. A national answer to the question, "Do sons follow their fathers' occupations?" Journal of Applied Psychology, 1955, 39, 419-421.

Kane, R. D., and Frazee, P. E. A study of women in non-traditional vocational education in secondary schools. R. J. Associates, Arlington, Virginia, May 1978.

Kane, R. D., Frazee, P. E., and Dee, E. A study of the factors influencing the participation of women in non-traditional occupations in postsecondary area vocational training schools. R. J. Associates, Inc. Research Report, Volume 1, Arlington, Virginia, November 1976.

Kerlinger, F. N. Foundations of behavior research. Second Edition. Holt, Rinehart and Winston, Inc. New York, 1973, 406-408.

Kirchner, E. P., and Vondracek, S. I. What do you want to be when you grow up? Vocational choice in children aged three to six. Paper presented at the meeting of the Society for Research in Child Development, Philadelphia, Pennsylvania, March, 1973.

- Kreppner, S. Junior high school students' vocational preferences and their parents' occupational levels. Personnel and Guidance Journal, 1963, 41, 590-595.
- Lazerson, M., and Grubb, W. N. (Eds.). American education and vocationalism: A documentary history. New York: Teachers College Press, 1974.
- Lehmann, P. First it was discrimination in vocational education. Now it's more subtle sex bias. Worklife, February, 1977, 3-5. (a)
- Lehmann, P. Women journey into the skilled trades. Worklife. August 1977, 28-29. (b)
- Lesser, E. Are we still sexist: A recent study of counselor attitudes. The School Counselor, 1976, 24, 84-92.
- Looft, W. R. Vocational aspirations of second-grade girls, Psychological Reports, 1971, 28, 241-242.
- Matthews, E., and Tiedeman, D. V. Attitudes toward career and marriage and the development of life style in young women. Journal of counseling psychology, 1964, 11, 375-384.
- McEwen, M. Counseling women: A review of the research. College Student Personnel, 1975, 16, 382-388.
- McEwen, C. A.; Brock; Moseley, M.; Muncey, D.; Rich, J.; Davis, D.; and Porter M. Sex-role stereotyping and participation in vocational education. Unpublished research project, 1978.  
(Available from Department of Educational and Cultural Services, Department of Education, State of Maine.)

- Miller, D. C. Handbook of research design and social measurement.  
New York: David McKay Company, Inc., 1970.
- National Council of Teachers of English. Publication on eliminating sexist language, 1979.
- National Education Association. Report on the committee on the place of industries in public education. Journal of proceeding and addresses, 1910, 652-773.
- National Association of Manufacturers. Reports of the committee on industrial education: Proceedings of the seventeenth annual convention, 1912, 151-161.
- Nelson, J. C. Interests of disadvantaged and advantaged negro and white first graders. Journal of Negro Education, 1968, 37, 168-173.
- North, C. C., and Hatt, P. K. Jobs and occupations: A popular evaluation. In L. Wilson and W. L. Kolb (Eds.). Sociological Analysis, New York: Harcourt, Brace, 1949, 464-474.
- O'Dowd, D. D. and Beardslee, D. C. The image of the college professor. AAUP Bulletin, 1961, 3, 216-221.
- O'Dowd, D. D. and Beardslee, D. C. A report on: Images of occupations. Wesleyan University, 1958.
- Olive, H. Sex differences in adolescent vocational preferences. Vocational Guidance Quarterly, 1972, 21, 199-201.
- Oliver, L. Counseling implications of recent research on women. Personnel and Guidance Journal, 1975, 53, 430-437.
- Oppenheim, A. N. Questionnaire design and attitude measurement.  
New York: Basic Books, Inc., 1966.

- Pallone, J. J.; Hurley, R. B.; and Richard, F. S. Data on key influencers of occupational expectations among minority youth. Journal of Counseling Psychology, 1973, 20, 484-486.
- Pavalko, R. Sociology of occupations and professions. Peacock, 1971.
- Perkins, C. D., Chairman, Subcommittee on elementary, secondary, and vocational education. Sex discrimination and sex stereotyping in vocational education. Washington, D. C.: Government Printing Office, 1975.
- Peters, E. F. Factors which contribute to youth's vocational choice. Journal of Applied Psychology, 1941, 25, 428-430.
- Powell, M., and Bloom, V. Development of and reasons for vocational choice of adolescents through the high school years. Journal of Educational Research, 1962, 56, 126-133.
- Psathas, G. Toward a theory of occupational choice for women. Sociology and Social Research, 1968, 52, 253-268.
- Putnam, B. A., and Hansen, J. C. Relationship of self-concept and feminine role concept to vocational maturity in young women. Journal of Counseling Psychology, 1972, 19, 436-440.
- Rand, L. M., and Miller, A. L. A developmental cross-sectioning of women's careers and marriage attitudes and life plans. Journal of Vocational Behavior, 1972, 2, 317-331.
- Report of the Committee on Education and Labor to accompany H. R. 12835 to amend the Vocational Education Act of 1963.
- Rosenberg, M. Occupations and values. Glencoe, Illinois: Free Press, 1957.

- Saario, T. N., Jacklin, G. N. Tittle, C. K. Sex-role stereotyping in the public schools. Harvard Educational Review, 1973, 43, 386-416.
- Schlossberg, N. K., and Goodman, J. A woman's place: children's sex-stereotyping of occupations. Vocational Guidance Quarterly, 1972, 20, 266-270.
- Schmidt, J. L., and Rothney, J. W. M. Variability of vocational choices of high school students. Personnel and Guidance Journal, 1955, 34, 142-146.
- Siegel, A. E. and Curtis, E. A. Familial correlates of orientation toward future employment among college women. Journal of Educational Psychology, 1963, 54, 33-37.
- Siegel, C. L. F. Sex differences in the occupational choices of second graders. Journal of Vocational Behavior, 1973, 3, 15-19.
- Simmons, R. G., and Rosenberg, M. Functions of children's perceptions of the stratification system. American Sociological Review, 1971, 36, 235-249.
- Singer, S., and Steffere, B. Sex differences in job values and desires. Personnel and Guidance Journal, 1954, 32, 483-484.
- Snell, M. Trying out male roles for size. American Vocational Journal, 1977, 52 (5), 59-60.
- Steinke, B. K., and Kaczowski, H. R. Parent's influence on the occupational choice of ninth grade girls. Vocational Guidance Quarterly, 1961, 9, 101-103.

- Stephens, W., and Van Til, W. Education in american life. Boston: Houghton Mifflin Co., 1972, 67 and 71.
- Tanney, M. and Birk, J. Women counselors for women clients? a review of the research. The Counseling Psychologist, 1976, 6, 28-32.
- Thomas, A. H. and Stewart, N. R. Counselor response to female clients with deviate and conforming career goals. Journal of Counseling Psychology, 1971, 18, 352-357.
- Tidball, M. E. Perspective on academic women and affirmative action. Educational Record, 1973, 54, 130-135.
- Tyack, D. B. The kingdom of God and the common school. Harvard Educational Review, Fall 1966, 447-469.
- Tyack, D. B. The one best system: a history of american urban education. Cambridge, Mass.: Harvard University Press, 1976, 58-59.
- U. S. Bureau of Census. Statistical abstract of the U. S.: 1977 (98th ed.). Washington, D. C., 1977.
- U. S. Office of Education publication. Summary data, vocational education. Fiscal Year 1972.
- U. S. Department of Health, Education, and Welfare, Division of Vocational and Technical Education. Comparative Analysis of vocational education enrollment by sex in fiscal years 1972 and 1975. June 17, 1976, 2.
- Virginia Employment Commission. "Virginia employment projections program," 1979.
- Walker, K. F. A study of occupational stereotypes. Journal of Applied Psychology, 1958, 42, 122-124.

- Williams, J. A. Interviewer-respondent interaction: a study of bias in information interviews. In R. Cochrane (Ed.), Advances in Social Research. London: Constable and Company Ltd., 1973.
- Weinstein, E. A. Children's conceptions of occupational stratification. Sociology and Social Research, 1958, 42, 278-284.
- Witty, P., Garfield, S., and Brink, W. G. A comparison of the vocational interests of negro and white high-school students. Journal of Educational Psychology, 1941, 32, 124-132.
- Wylie, R. C. Children's estimates of their schoolwork ability as a function of sex, race, and socioeconomic level. Journal of Personality, 1963, 31, 203-224.
- Zytowski, D. G. Toward a theory of career development for women. Personnel and Guidance Journal, 1969, 47, 660-664.

APPENDIX A

Member List of Jury of Experts

and

Interview Schedule



Jury of Experts

1. Dr. Kurt Eschenmann

Vocational and Technical Education

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2.

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3.

Vocational and Technical Education

College of Education

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4.

Research Division

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## STUDENT INTERVIEW SCHEDULE

### I. PREPARATION BEFORE INTERVIEW

Before the interview, the following information was recorded on tape:

1. code number
2. sex of the interviewee
3. racial/ethnic description of the interviewee
4. name of the vocational program

### II. INTRODUCTORY REMARKS

In order to establish rapport with the interviewee, the following introductory remarks were made.

Hi, my name is Lorene Evans. (Allow the student to introduce himself/herself or ask the student his/her name.)

I appreciate you agreeing to participate in this study. Let me briefly tell you about the work I am doing. I am concerned with female students who are enrolled in traditionally male occupational programs and male students who are enrolled in traditionally female occupational programs. The purpose of this interview is to investigate any **concerns, limitations, or problems**

you have encountered as a result of being in a predominantly (male/female) program. There may be questions that I will ask that you will feel you have already answered. Since I have an interview format that I must follow, I would appreciate your answering each question. Anything you say will be kept confidential, so please feel free to express your feelings.

In answering these questions, keep in mind that there are no right or wrong answers. Each person has their own opinions, and I am interested in how you, yourself, feel about the problems of being in a predominantly (male/female) program. Okay?

It will be much easier if I don't have to take notes during the interview. If you don't mind, I'll use a tape recorder during the interview and make notes later. The recording will be erased after I finish with it, and no one else will hear it. Will that be alright with you?

### III. BACKGROUND INFORMATION

At this time, the tape recorder was turned on and the interview began.

The following questions were asked of the interviewee in order to obtain necessary background information.

1. How old are you?
2. How long have you been enrolled in (name of program)?
3. Are you enrolled in (name of program) primarily for your personal interest and use or are you enrolled in (name of program) because you are preparing yourself for employment in this field of work?

- 4a. Are you the only (male/female) in your (name of program) class?

(If answer is yes, proceed to IV.)

(If answer is no, proceed to b.)

- b. How many other (males/females) are in your (name of program) class?

## IV. INTERVIEW FOR FEMALES IN NON-TRADITIONAL PROGRAMS

School Related Problems

- 1a. Have you ever encountered any negative attitudes or problems with the male teachers in (name of program), because you are a female in a predominantly male program?  
(If answer is yes, proceed to b and c.)  
(If answer is no, proceed to 2.)
- b. What were the negative attitudes or problems?
- c. Would you say these were of minor, moderate, or major concern to you?
- 2a. Have you ever encountered any negative attitudes or problems with other faculty members, because you are a female in a predominantly male program?  
(If answer is yes, proceed to b and c.)  
(If answer is no, proceed to 3.)
- b. What were the negative attitudes or problems?
- c. Would you say these were of minor, moderate, or major concern to you?
- 3a. Are there any female teachers in (name of program)?  
(If answer is yes, proceed to b.)  
(If answer is no, proceed to d.)
- b. Would you like to have female teachers in (name of program)?  
(If answer is yes, proceed to c.)  
(If answer is no, proceed to 4.)

- c. Would you say this of minor, moderate, or major concern to you?  
(Proceed to 4.)
- d. Would you like to have female teachers in (name of program)?  
(If answer is yes, proceed to e.)  
(If answer is no, proceed to 4.)
- e. Would you say this is of minor, moderate, or major concern to you?
- 4a. Did you talk to a guidance counselor before enrolling in (name of program)?  
(If answer is yes, proceed to b and c.)  
(If answer is no, proceed to 5.)
- b. Was the counselor a male or female?
- c. Did the counselor try to discourage you in any way from entering a predominantly male program?  
(If answer is yes, proceed to d and e.)  
(If answer is no, proceed to 5.)
- d. What did the counselor say to try to discourage you?
- e. Would you say the counselor's negative attitude was of minor, moderate, or major concern to you?
- 5a. Have you ever talked to a guidance counselor about a problem or concern you were having as a result of being in a predominantly male program?  
(If answer is yes, proceed to b and c.)  
(If answer is no, proceed to 6.)

- b. Was the counselor a male or female?
  - c. Do you have any complaints about the guidance you received from the counselor?  
(If answer is yes, proceed to d and e.)  
(If answer is no, proceed to 6.)
  - d. What are your complaints about the guidance you received?
  - e. Would you say these complaints are of minor, moderate, or major concern to you?
- 6a. Have you ever encountered any negative attitudes or problems with administrators, because you are a female in a predominantly male program?  
(If answer is yes, proceed to b and c.)  
(If answer is no, proceed to 7.)
- b. What were the negative attitudes or problems?
  - c. Would you say these were of minor, moderate, or major concern to you?
- 7a. Do you have any special needs as a female in a predominantly male program that are being overlooked by teachers, counselors, or administrators?  
(If answer is yes, proceed to b and c.)  
(If answer is no, proceed to 8.)
- b. What are the special needs that have been overlooked or neglected?
  - c. Would you say these have been of minor, moderate, or major concern to you?

- 8a. Have you found that school pamphlets, textbooks, and other resources or materials used by your school and in (name of program) tend to be sexist by picturing females in primarily traditional roles or by using sexist language?
- (If answer is yes, proceed to b and c.)
- (If answer is no, proceed to 9.)
- b. What was the sexist treatment of females and where did you find it?
- c. Would you say that this has been of minor, moderate, or major concern to you?

Curriculum and Operational Problems

- 9a. When you first started taking (name of program), did you feel that the males had an advantage over you, because they were better prepared in certain subjects which are important in studying (name of program)?
- (If answer is yes, proceed to b, c, and d.)
- (If answer is no, proceed to 10.)
- b. In what subject/subjects do you feel males have a better background?
- c. When you first started taking (name of program), would you say that inadequate preparation in these subjects were of minor, moderate, or major concern to you?
- d. Is inadequate preparation in these subjects still a problem or concern of yours?
- (If answer is yes, proceed to e.)
- (If answer is no, proceed to 10.)



- e. Would you say that this is presently of minor, moderate, or major concern to you?
- 10a. When you first started taking (name of program), did you feel the males had an advantage over you, because they were more familiar with equipment and language used in studying (name of program)?
- (If answer is yes, proceed to b and c.)
- (If answer is no, proceed to 11.)
- b. When you first started taking (name of program), would you say that the advantage the males had was of minor, moderate, or major concern to you?
- c. Is the advantage that the males had in the beginning still a problem or concern of yours?
- (If answer is yes, proceed to d.)
- (If answer is no, proceed to 11.)
- d. Would you say that this is presently of minor, moderate, or major concern to you?
- 11a. Do you feel you have been able to use the equipment and/or tools as well as the males in your program?
- (If answer is no, proceed to b and c.)
- (If answer is yes, proceed to 12.)
- b. What problems have you had using the equipment and/or tools?
- c. Would you say this has been a minor, moderate, or major problem for you?

12a. Because you are a female, have you encountered any difficulty in being physically able to accomplish work you have had to perform in (name of program)?

(If answer is yes, proceed to b and c.)

(If answer is no, proceed to 13.)

b. What was the physical difficulty you encountered?

c. Would you say this has been a minor, moderate, or major problem for you?

### Peer Problems

13a. Have you ever encountered any negative attitudes or problems with the male students in (name of program), because you are a female in a predominantly male program?

(If answer is yes, proceed to b and c.)

(If answer is no, proceed to 14.)

b. What were the negative attitudes or problems?

c. Would you say these have been of minor, moderate, or major concern to you?

14a. Have you ever encountered any negative attitudes or problems with males who are not enrolled in (name of program), because you are a female in a predominantly male program?

(If answer is yes, proceed to b and c.)

(If answer is no, proceed to 15.)

b. What were the negative attitudes or problems?

c. Would you say these have been of minor, moderate, or major concern to you?

15a. Have you ever encountered any negative attitudes or problems with females, because you are a female in a predominantly male program?

(If answer is yes, proceed to b and c.)

(If answer is no, proceed to 16.)

b. What were the negative attitudes or problems?

c. Would you say these have been of minor, moderate, or major concern to you?

#### Family Related Problems

16a. Have your parents or guardians ever voiced any objections to your enrollment in a predominantly male program?

(If answer is yes, proceed to b and c.)

(If answer is no, proceed to 17.)

b. What were the objections voiced by your parents or guardians?

c. Would you say these objections have been of minor, moderate, or major concern to you?

17a. How many brothers and sisters do you have?

(If answer is one or more, proceed to b and c.)

(If answer is none, proceed to 18.)

b. What is your birth order or place with the children in your family? For example, you might answer that you are the second of five children.

c. Have your brother(s) and/or sister(s) ever made any negative comments about your enrollment in a predominantly male program?

(If answer is yes, proceed to d and e.)

(If answer is no, proceed to 18.)

- d. What were the negative comments?
- e. Would you say these comments have been of minor, moderate, or major concern to you?

18a. Are you married?

(If answer is yes, proceed to b.)

(If answer is no, proceed to 19.)

- b. Has your husband ever voiced any objections to your enrollment in a predominantly male program?

(If answer is yes, proceed to c and d.)

(If answer is no, proceed to 19.)

- c. What were the objections voiced by your husband?
- d. Would you say these objections have been of minor, moderate, or major concern to you?

#### Problems With Self

19a. Would you like to have more female students in (name of program)?

(If answer is yes, proceed to b.)

(If answer is no, proceed to 20.)

- b. Have you ever felt isolated or lonesome in (name of program), because you are a female in a predominantly male program?

(If answer is yes, proceed to c.)

(If answer is no, proceed to 20.)

- c. Would you say this feeling of isolation is of minor, moderate, or major concern to you?
- 20a. Have you ever experienced feelings of inadequacy or inferiority when comparing yourself to the males in (name of program)?
- (If answer is yes, proceed to b and c.)
- (If answer is no, proceed to 21.)
- b. Why do you think you have had these feelings?
  - c. Would you say these feelings have been of minor, moderate, or major concern to you?

Other Problems

- 21a. Have you had to face any other concerns, limitations, or problems that have not been mentioned already in this interview, because you are a female in a predominantly male program?
- (If answer is yes, proceed to b and c.)
- (If answer is no, proceed to 22.)
- b. What were those concerns, limitations, or problems?
  - c. Would you say these have been of minor, moderate, or major concern to you?

Greatest Problem or Concern

22. Of all the problems and concerns that you have mentioned, what has been the greatest problem or concern that you have encountered as a result of being enrolled in a predominantly male program?

Suggestions

23. Do you have any suggestions that you would like to make to counselors, teachers, or administrators that would help in minimizing and/or eliminating the concerns and problems you have mentioned in this interview?

## V. INTERVIEW FOR MALES IN NON-TRADITIONAL PROGRAMS

School Related Problems

- 1a. Have you ever encountered any negative attitudes or problems with the female teachers in (name of program), because you are a male in a predominantly female program?  
(If answer is yes, proceed to b and c.)  
(If answer is no, proceed to 2.)
- b. What were the negative attitudes or problems?
- c. Would you say these were of minor, moderate, or major concern to you?
- 2a. Have you ever encountered any negative attitudes or problems with other faculty members, because you are a male in a predominantly female program?  
(If answer is yes, proceed to b and c.)  
(If answer is no, proceed to 3.)
- b. What were the negative attitudes or problems?
- c. Would you say these were of minor, moderate, or major concern to you?
- 3a. Are there any male teachers in (name of program)?  
(If answer is yes, proceed to b.)  
(If answer is no, proceed to d.)
- b. Would you like to have more male teachers in (name of program)?  
(If answer is yes, proceed to c.)  
(If answer is no, proceed to 4.)

- c. Would you say this is of minor, moderate, or major concern to you?  
(Proceed to r.)
- d. Would you like to have male teachers in (name of program)?  
(If answer is yes, proceed to e.)  
(If answer is no, proceed to 4.)
- e. Would you say this is of minor, moderate, or major concern to you?
- 4a. Did you talk to a guidance counselor before enrolling in (name of program)?
- b. Was the counselor a male or female?
- c. Did the counselor try to discourage you in any way from entering a predominantly female program?  
(If answer is yes, proceed to d and e.)  
(If answer is no, proceed to 5.)
- d. What did the counselor say to try to discourage you?
- e. Would you say the counselor's negative attitude was of minor, moderate, or major concern to you?
- 5a. Have you ever talked to a guidance counselor about a problem or concern you were having as a result of being in a predominantly female program?  
(If answer is yes, proceed to b and c.)  
(If answer is no, proceed to 6.)
- b. Was the counselor a male or female?



- c. Do you have any complaints about the guidance you received from the counselor?

(If answer is yes, proceed to d and e.)

(If answer is no, proceed to 6.)

- d. What are your complaints about the guidance you received?

- e. Would you say these complaints are of minor, moderate, or major concern to you?

- 6a. Have you ever encountered any negative attitudes or problems with administrators, because you are a male in a predominantly female program?

(If answer is yes, proceed to b and c.)

(If answer is no, proceed to 7.)

- b. What were the negative attitudes or problems?

- c. Would you say these were of minor, moderate, or major concern to you?

- 7a. Do you have any special needs as a male in a predominantly female program that are being overlooked or neglected by teachers, counselors, or administrators?

(If answer is yes, proceed to b and c.)

(If answer is no, proceed to 8.)

- b. What are the special needs that have been overlooked or neglected?

- c. Would you say these have been of minor, moderate, or major concern to you?

8a. Have you found that school pamphlets, textbooks, and other resources or materials used by your school and in (name of program) tend to be sexist by picturing males in primarily traditional roles or by using sexist language?

(If answer is yes, proceed to b and c.)

(If answer is no, proceed to 9.)

- b. What was the sexist treatment of males and where did you find it?
- c. Would you say that this has been of minor, moderate, or major concern to you?

#### Curriculum and Operational Problems

9a. When you first started taking (name of program), did you feel that the females had an advantage over you, because they were better prepared in certain subjects which are important in studying (name of program)?

(If answer is yes, proceed to b, c, and d.)

(If answer is no, proceed to 10.)

- b. In what subject/subjects do you feel males have a better background?
- c. When you first started taking (name of program), would you say that inadequate preparation in these subjects were of minor, moderate, or major concern to you?
- d. Is inadequate preparation in these subjects still a problem or concern of yours?

(If answer is yes, proceed to e.)

(If answer is no, proceed to 10.)

- e. Would you say that this is presently of minor, moderate, or major concern to you?
- 
- 10a. When you first started taking (name of program), did you feel the females had an advantage over you, because they were more familiar with equipment and language used in studying (name of program)?  
  
(If answer is yes, proceed to b and c.)  
(If answer is no, proceed to 11.)
  - b. When you first started taking (name of program), would you say that the advantage the females had was of minor, moderate, or major concern to you?
  - c. Is the advantage that the females had in the beginning still a problem or concern of yours?  
  
(If answer is yes, proceed to d.)  
(If answer is no, proceed to 11.)
  - d. Would you say that this is presently of minor, moderate, or major concern to you?
- 
- 11a. Do you feel you have been able to use the equipment and/or tools as well as the females in your program?  
  
(If answer is no, proceed to b and c.)  
(If answer is yes, proceed to 12.)
  - b. What problems have you had using the equipment and/or tools?
  - c. Would you say this has been a minor, moderate, or major problem for you?

12a. Because you are a male, have you encountered any difficulty in being physically able to accomplish work you have had to perform in (name of program)?

(If answer is yes, proceed to b and c.)

(If answer is no, proceed to 13.)

b. What was the physical difficulty you encountered?

c. Would you say this has been a minor, moderate, or major problem for you?

#### Peer Problem

13a. Have you ever encountered any negative attitudes or problems with the female students in (name of program), because you are a male in a predominantly female program?

(If answer is yes, proceed to b and c.)

(If answer is no, proceed to 14.)

b. What were the negative attitudes or problems?

c. Would you say these have been of minor, moderate, or major concern to you?

14a. Have you ever encountered any negative attitudes or problems with females who are not enrolled in (name of program), because you are a male in a predominantly female program?

(If answer is yes, proceed to b and c.)

(If answer is no, proceed to 15.)

b. What were the negative attitudes or problems?

c. Would you say these have been a minor, moderate, or major concern to you?

15a. Have you ever encountered any negative attitudes or problems with males, because you are a male in a predominantly female program?

(If answer is yes, proceed to b and c.)

(If answer is no, proceed to 16.)

b. What were the negative attitudes or problems?

c. Would you say these have been of minor, moderate, or major concern to you.

#### Family Related Problems

16a. Have your parents or guardians ever voiced any objections to your enrollment in a predominantly female program?

(If answer is yes, proceed to b and c.)

(If answer is no, proceed to 17.)

b. What were the objections voiced by your parents or guardians?

c. Would you say these objections have been of minor, moderate, or major concern to you?

17a. How many brothers and sisters do you have?

(If answer is one or more, proceed to b and c.)

(If answer is none, proceed to 18.)

b. What is your birth order or place with the children in your family? For example, you might answer that you are the second of five children.

c. Have your brother(s) and/or sister(s) ever made any negative comments about your enrollment in a predominantly female program?

(If answer is yes, proceed to d and e.)

(If answer is no, proceed to 18.)

- d. What were the negative comments?
- e. Would you say these comments have been of minor, moderate, or major concern to you?

18a. Are you married?

(If answer is yes, proceed to b.)

(If answer is no, proceed to 19.)

- b. Has your wife ever voiced any objections to your enrollment in a predominantly female occupational program?

(If answer is yes, proceed to c and d.)

(If answer is no, proceed to 19.)

- c. What were the objections voiced by your wife?
- d. Would you say these objections have been of minor, moderate, or major concern to you?

#### Problems With Self

19a. Would you like to have more male students in (name of program)?

(If answer is yes, proceed to b.)

(If answer is no, proceed to 20.)

- b. Have you ever felt isolated or lonesome in (name of program), because you are a male in a predominantly female program?

(If answer is yes, proceed to c.)

(If answer is no, proceed to 20.)

- c. Would you say this feeling of isolation is of minor, moderate, or major concern to you?

20a. Have you ever experienced feelings of inadequacy or inferiority when comparing yourself to the females in (name of program)?

(If answer is yes, proceed to b and c.)

(If answer is no, proceed to 21.)

b. Why do you think you have had these feelings?

c. Would you say these feelings have been of minor, moderate, or major concern to you?

Other Problems

21a. Have you had to face any other concerns, limitations, or problems that have not been mentioned already in this interview, because you are a male in a predominantly female program?

(If answer is yes, proceed to b and c.)

(If answer is no, proceed to 22.)

b. What were those concerns, limitations, or problems?

c. Would you say these have been of minor, moderate, or major concern to you?

Greatest Problem or Concern

22. Of all the problems and concerns that you have mentioned, what has been the greatest problem or concern that you have encountered as a result of being enrolled in a predominantly female program?

Suggestions

23. Do you have any suggestions that you would like to make to counselors, teachers, or administrators that would help in minimizing and/or eliminating the concerns and problems you have mentioned in this interview?



APPENDIX B

Themes

QUESTION  
NUMBERTHEMES

1b

Teachers do not assign non-traditional students as much work as they assign traditional students.

Teachers assign non-traditional students more tasks unrelated to the vocational skills taught in the program than they do to traditional students.

Teachers give non-traditional students more attention and consideration than they do traditional students in the program.

Teachers of the vocational program use sexist language in class.

Teachers usually request non-traditional male students to do the physically heavy work.

Teachers of the vocational program present information in class applicable only to the traditional student and disregard the non-traditional student's needs.

2b

Faculty members who do not teach in the vocational program disapprove of the non-traditional student's enrollment in a sex-typed program.

QUESTION  
NUMBERTHEMES

- 2b Faculty members who do not teach in the vocational program make fun of the non-traditional student's enrollment in a sex-typed program.
- 3b Non-traditional students would like to have a teacher of their own sex teaching in the sex-typed vocational program.
- 4d Counselors try to discourage the non-traditional student's enrollment in sex-typed vocational programs by encouraging them to enroll in stereotyped programs for their sex.
- Counselors try to discourage non-traditional students from enrolling in sex-typed vocational programs by telling them they would be the only one of their sex in the program.
- Counselors try to discourage non-traditional students, from enrolling in sex-typed vocational programs by telling them that the programs stereotyped for their sex would be easier.
- 6b Administrators question whether the non-traditional student has homosexual tendencies.
- 7b Non-traditional female students do not have a locker room in which to change clothes like the traditional male students.

QUESTION  
NUMBER

THEMES

- 7b Non-traditional male students need desks and chairs to accommodate their size.
- 8b Resource materials use sexist language.  
  
Resource materials picture sex-typed roles.
- 9b Non-traditional male students feel traditional females have an advantage in the beginning, because they have a better english background.  
  
Non-traditional female students feel traditional males have an advantage in the beginning, because they are better prepared as a result of having had an industrial arts class.  
  
Non-traditional male students feel traditional females have an advantage in the beginning, because they are better prepared as a result of having had a home economics class.  
  
Non-traditional female students feel traditional males have an advantage in the beginning, because they have a better science background.

QUESTION  
NUMBER

THEMES

- 10a Non-traditional students feel traditional students have an advantage in the beginning, because they are more familiar with equipment and language used in the program.
- 11b Non-traditional female students cannot use the saw as well as traditional males in the program.
- Non-traditional female students cannot use the welding equipment as well as the traditional males in the program.
- Non-traditional students cannot use the equipment as well as the traditional students, because they are not allowed to use the equipment as often as the traditional students.
- Non-traditional students cannot use the equipment as well as the traditional students, because they are not as familiar with the tools as the traditional student.
- 12b Non-traditional females encounter difficulty lifting heavy objects.
- 13b. Traditional students harass non-traditional students in the vocational program.
- 13b Traditional students harass non-traditional students in the vocational program.

QUESTION  
NUMBER

THEMES

13b Traditional students in the vocational program question whether the non-traditional student can succeed in a sex-typed field of work.

Traditional students think they can do the work better than non-traditional students in the vocational program.

Traditional students disapprove of the new traditional student's enrollment in the vocational program.

Traditional students in the vocational program do not socialize with the non-traditional student.

Traditional students in the program think the non-traditional student may be homosexual.

14b Students of the opposite sex who are not in the vocational program disapprove of the non-traditional student's enrollment.

Students of the opposite sex who are not in the vocational program harass non-traditional students about their enrollment in a sex-typed program.

Students of the opposite sex who are not in the vocational program think the non-traditional student is in the program. to be around the opposite sex.

QUESTION  
NUMBER

THEMES

14b Students of the opposite sex who are not in the vocational program think the non-traditional student may be homosexual.

Students of the opposite sex who are not in the program question whether the non-traditional student can succeed in a sex-typed field of work.

15b Students of the same sex who are not in the vocational program think the non-traditional student is in the program to be around the opposite sex.

Students of the same sex who are not in the vocational program think the non-traditional student will have it easy and receive good grades.

Students of the same sex who are not in the vocational program harass non-traditional students in the vocational program.

Students of the same sex who are not in the vocational program disapprove of the non-traditional student's enrollment.

Students of the same sex who are not in the vocational program lack confidence in the non-traditional student's ability to succeed in the program.

QUESTION  
NUMBER

THEMES

- 15b            Students of the same sex who are not in the vocational program think the non-traditional student may be homosexual.
- Students of the same sex who are not in the vocational program think the non-traditional student is enrolled in the program to get attention.
- Students of the same sex who are not in the vocational program do not socialize with the non-traditional student.
- 16b            Parents of the non-traditional students disapprove of their enrollment in a sex-typed program.
- Parents of non-traditional students think they are in the program to be around the opposite sex.
- Parents of non-traditional students lack confidence in their ability to succeed in the program.
- 17d            Siblings of non-traditional students disapprove of their enrollment in a sex-typed program.
- Siblings of non-traditional students harass them about their enrollment in a sex-typed program.
- 18b            Spouses of non-traditional students lack confidence in their ability to succeed in a sex-typed field of work.



QUESTION  
NUMBER

THEMES

- 19b            Non-traditional students encounter feelings of isolation.
- 20b            Non-traditional students feel traditional students in  
the program can do the work better.
- Non-traditional students feel the need to prove they can  
do the work because of their sex.
- Non-traditional students doubt their ability to perform  
on the job.
- Non-traditional students lack confidence in their ability  
to succeed in the program.
- 21b            Supervisors on the job have difficulty relating to a  
non-traditional worker.
- Supervisors on the job will not allow the non-traditional  
female worker to do the physically heavy work.
- Non-traditional students encounter difficulty finding  
employment in the sex-typed field of work.
- Supervisors on the job usually request the non-traditional  
male worker to do the physically heavy work.
- Traditional workers on the job have difficulty relating  
to a non-traditional worker.

QUESTION  
NUMBER

THEMES

21b

Non-traditional students fear they will not get a job if they enter the cooperative training program of the sex-typed vocational program.

Non-traditional students fear that if they enter the cooperative training program of the sex-typed vocational program, they will get stereotyped jobs associated with the opposite sex.

Non-traditional students on the job are made to feel conspicuous by all the attention they receive.

Non-traditional students fear they will be hired only because of their sex.

23

Industrial arts classes should be offered during the summer, and females should be encouraged to take the classes before going into sex-typed programs.

Teachers should not assume everyone can perform the work just because the traditional students can.

Educators should encourage potential non-traditional students to consider taking sex-typed vocational programs.

Educators should present positive and appealing aspects of sex-typed vocational programs instead of negative and unappealing aspects to potential non-traditional students.

QUESTION  
NUMBER

THEMES

23

Educators should treat all students regardless of sex as equals.

Educators should make available information about sex-typed programs.

Educators should utilize non-traditional people successfully employed or enrolled in sex-typed fields when recruiting students for vocational programs.

Educators should offer encouragement and support to non-traditional students in sex-typed programs.

Educators should encourage traditional and non-traditional students to cooperate and work together in sex-typed programs.

Educators should help traditional students better deal with the presence of non-traditional students in the sex-typed fields of work.

More teachers of the same sex as the non-traditional students should be hired to teach in sex-typed programs.

Educators should be more sensitive to the non-traditional student's feelings.

QUESTION  
NUMBERTHEMES

23

Educators should provide opportunities for non-traditional students to share their experiences in the sex-typed programs with each other.

Educators should encourage potential non-traditional male students to take home economics courses before entering related vocational programs utilizing the related knowledge and skills.

Educators should provide nonsexist resource materials for classroom use.

Educators should help potential non-traditional female students to acquire mechanical skills before entering vocational programs utilizing those skills.

Educators should tell potential non-traditional students that they have to really want to do it in order to succeed in a sex-typed program.

Educators should give the same amount of work to all students regardless of sex.

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PROBLEMS ENCOUNTERED BY NON-TRADITIONAL STUDENTS  
ENROLLED IN SECONDARY VOCATIONAL EDUCATION PROGRAMS

by

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(ABSTRACT)

Statement of the Problem

The central problem of this study was to identify problems which non-traditional students enrolled in sex-typed vocational education programs in four school divisions in a large metropolitan area have encountered as a result of such enrollment and the impact of those problems on the student. Specifically, non-traditional students enrolled in secondary education programs in the four school divisions were interviewed. The interviews identified: (a) the problems encountered by non-traditional students; (b) the extent of the non-traditional students' concern about the problems they encounter; and (c) the greatest problems or concerns encountered by non-traditional students.

Research Procedures

Exploratory field research was used with the interview technique being utilized to collect data. Sixty-eight non-traditional students of seventy-one total non-traditional students participated in the research study. The researcher served as the interviewer for structured interviews utilizing closed-and open-ended questions on an

interview schedule. Respondents' answers were recorded on audio tape during each interview and then transcribed.

Interview transcripts served as the source material for the content analysis portion of the study. The theme category for all themes or problem statements was the unit of analysis selected. Every theme representing each specific problem identified by the respondent was coded into a theme category for which a frequency count was also indicated. Accuracy of the content analysis was measured by four experienced vocational-technical educators with expertise in the area of sex-role stereotyping.

### Conclusions

1. Non-traditional students are not very concerned with school related problems.
2. Non-traditional students are more concerned with problems concerning "parents or guardians" than they are with "siblings."
3. Few non-traditional students seek the assistance of guidance counselors with problems they encounter in sex-typed programs.
4. School related problems were most often reported of greatest concern by students who did not attribute much concern to any problems they encountered.
5. Educators within the school setting are not the greatest concern or problem of most non-traditional students.