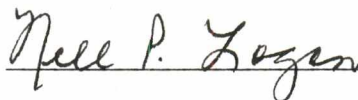


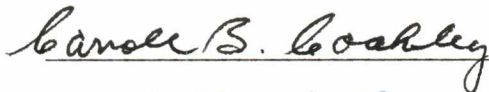
To the Graduate Council:

I am submitting herewith a dissertation written by S. Carolyn Burkhart entitled "Influential Factors Affecting Enrollment Into Non-Traditional Vocational-Education Programs as Perceived by Educational Personnel." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Vocational-Technical Education.


George W. Wieggers, Jr.
Major Professor

We have read this dissertation
and recommend its acceptance:

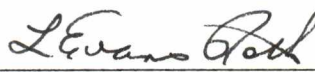

Nell P. Lozen


Harold B. Coakley


Walter A. Cameron


Leroy H. Stollar

Accepted for the Council:


L. Evans Gosh
Vice Chancellor
Graduate Studies and Research

INFLUENTIAL FACTORS AFFECTING ENROLLMENT INTO NON-TRADITIONAL
VOCATIONAL EDUCATION PROGRAMS AS PERCEIVED
BY EDUCATIONAL PERSONNEL

A Dissertation
Presented for the
Doctor of Education
Degree
The University of Tennessee, Knoxville

S. Carolyn Burkhart

December 1980

3046914

ACKNOWLEDGMENTS

To the many groups and persons throughout the Nation the author expresses sincere thanks and appreciation. Gratitude is expressed to the campus review committee for their suggestions in validating the survey instrument. Special thanks is extended to the school system that assisted in validating the questionnaire.

Greatest appreciation is offered to Dr. George W. Wiegers, Jr. who, as committee chairman, directed and advised the author in completing the study. Appreciation is expressed also to Dr. Dewey H. Stollar, to Dr. Carroll B. Coakley, Dr. Walter Cameron, and Dr. Nell Logan for their services as committee members in suggesting, planning and assisting in this study.

Special gratitude is extended to Mrs. Wanda Dye who assisted in duplicating materials for this study.

The author is especially thankful for an understanding family whose encouragement and assistance have been endless and invaluable.

ABSTRACT

The major purpose of the study was to identify perceptions of educational personnel toward influencing the enrollment of females into non-traditional vocational education programs. A secondary purpose was to determine if there was congruence of those perceptions among educational personnel. Specifically, the study attempted to determine how (1) state directors of vocational education, (2) state sex equity coordinators, (3) presidents of state vocational associations, and (4) state directors of counseling perceived factors influencing the enrollment of females into non-traditional vocational education programs which included items pertaining to school programs and personnel, parent and peer information, reasons for selection and classroom factors.

The study included 145 individuals comprising four reference groups. Four individuals from each state were included: (1) state director of vocational education (N = 42), (2) state sex equity coordinator (N = 42), (3) president of state vocational association (N = 32) and (4) state director of counseling (N = 31).

A questionnaire was developed, submitted to a campus review committee for face validity, clarity, and appropriateness of items. The reliability estimate computed for the instrument was .96. A pilot study was conducted in order to achieve further validation.

Computations of frequencies, percentages, and means were completed for the 50 items for each of the four groups. Homogeneity

of variance was tested using the Bartlett Box-F test. Differences between reference groups' mean perceptions were tested by using the one-way analysis of variance. Scheffe's multiple comparison test was used to locate significant differences between the four groups.

Twelve out of 50 items were perceived by state directors of vocational education, 26 by state sex equity coordinators, 13 by presidents of state vocational associations, and 15 by state directors of counseling as having a high degree of influence on the enrollment of females into non-traditional vocational education programs.

No significant differences were found between the mean perceptions of state directors of vocational education and state directors of counseling, between state directors of vocational education and presidents of state vocational associations, and between state directors of counseling and presidents of state vocational associations.

The following null hypotheses failed to be accepted:

H_2 , "There are no significant differences between the mean perceptions of state directors of vocational education and state sex equity coordinators." Significant differences were found when state directors of vocational education and state sex equity coordinators mean influential ratings were compared for each item. Differences occurred in 11 out of 50 items.

H_6 , "There are no significant differences between the mean perceptions of state sex equity coordinators and presidents of state vocational associations." Significant differences were found when state equity coordinators and presidents of state vocational

associations mean influential ratings were compared for each item. Differences occurred in 14 out of 50 items.

Based on the findings of the study the researcher concluded that state directors of vocational education, presidents of state vocational associations, and state directors of counseling perceived a very small number of items as having a high degree of influence on the enrollment of females into non-traditional vocational education programs. State sex equity coordinators perceived more items than the three other groups as having a high degree of influence, but the number was small in relation to the total number of items. Classroom factors were perceived by state sex equity coordinators as having a high degree of influence on enrollment of females into non-traditional vocational programs. All groups agreed that counselors and teachers do not exert a high degree of influence on females toward non-traditional roles. All groups perceived "contact with women employed in non-traditional careers," "parental attitudes," "parent involvement," and "early orientation to a variety of occupations" as having a high degree of influence on female decision making. State directors of counseling perceived that counseling has no influence on females in non-traditional career decisions.

TABLE OF CONTENTS

CHAPTER	PAGE
I. THE PROBLEM OF THE STUDY	1
Introduction	1
The Problem	3
Hypotheses	4
Importance of the Study	5
Delimitations and Limitations of the Study	8
Definitions of Terms	9
Organization of the Study	10
II. REVIEW OF RELATED LITERATURE	11
Introduction	11
Research Studies	13
Conference Proceedings	33
Articles	36
Summary	47
III. METHODOLOGY AND PROCEDURES	49
Introduction	49
Method of Research	49
The Population	49
Instrumentation	50
Data Collection	52
Methods of Data Collection	53
Tests for Significant Differences	56

CHAPTER	PAGE
IV. PRESENTATION OF THE DATA	57
Introduction	57
Perceptions of Educational Personnel Concerning	
Influential Factors	58
Significant Differences in the Perceptions of	
Educational Personnel	83
V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	90
Summary of the Procedures	90
Summary of the Findings	93
Conclusions	96
Recommendations	97
SELECTED BIBLIOGRAPHY	98
APPENDICES	105
APPENDIX A: CAMPUS REVIEW COMMITTEE	106
APPENDIX B: TRANSMITTAL LETTER, INFORMATION SHEET, CONSENT	
FORM AND QUESTIONNAIRE	108
APPENDIX C: DIRECTORIES OF EDUCATIONAL PERSONNEL	115
APPENDIX D: FOLLOW-UP LETTER	147
VITA	149

LIST OF TABLES

TABLE	PAGE
I. Questionnaire Distributions, Follow-Up and Returns	54
II. Group I--Mean Perceptions of State Directors of Vocational Education	59
III. Group II--Mean Perceptions of State Sex Equity Coordinators	65
IV. Group III--Mean Perceptions of Presidents of State Vocational Associations	71
V. Group IV--Mean Perceptions of State Directors of Counseling	78
VI. One-Way ANOVA Summary Table for Study Comparing Different Item Arrangements	85
VII. Scheffe's Procedure for Denoting Pairs of Groups Significantly Different	87

CHAPTER I

THE PROBLEM OF THE STUDY

I. INTRODUCTION

Career choices represent an extension of personality and an attempt to implement broad personal behavioral styles in the context of one's life work. Studies conducted by Holland indicated that people project their views of themselves and the world of work onto occupational titles.¹ In the past, emphasis has been placed on male/female roles rather than on developing the full potential of the individual. Evidence of discrimination can be noted in the areas of curriculum, testing, counseling, extra-curricular activities, youth groups, salaries, positions, admissions, recruitment, promotion, certification, committees, placement, tenure and fringe benefits. Discrimination in vocational education on the basis of sex begins with the denial of equal employment opportunities and related benefits. The elimination of sex bias and stereotyping does not imply that there will necessarily be equal numbers of males and females in all programs, rather that there will be the widest possible variation in behavior consistent with the range of individual differences among people, regardless of sex.

¹J.L. Holland, D.R. Whitney, N.N. Cob, and J.M. Richards, "An Empirical Occupational Classification Derived from a Theory of Personality and Intended for Practice and Research," ACT Research Report, No. 29, Iowa City: The American College Testing Program, 1969.

In the 1976 Education Amendments special emphasis was placed on eliminating sex stereotyping and bias in education and particularly so in vocational education. Public Law No. 94-482 appropriated funds to pay 75 percent of the cost of activities which show promise of overcoming sex stereotyping and bias in vocational education.

Choosing an occupation not only deals with an individuals' interests, capacities, abilities, attitudes, and goals but also must be concerned with whether it is traditionally a male or female occupation. In today's society, sex stereotyping and bias are attached to both male and female student enrollment into "non-traditional" programs as well as traditional programs. "Non-traditional" programs are defined as areas of instruction not usually entered by students of both sexes.

Although attempts are being made throughout many states to eliminate sex bias and sex stereotyping, the enrollment figures continue to project the same picture. The picture being that vocational education programs are promoting and obtaining enrollment into the same traditional programs for both males and females and that very little change is occurring that promotes the idea that all vocational programs are recruiting and open to both sexes. It would appear that very little progress has been made.

Once educators eradicate sex stereotyping in the schools, girls and boys will have greater freedom in choosing satisfying careers and life roles. The humanization of our institutions should

lead to a society in which women and men may become whole, self-realized persons.²

II. THE PROBLEM

Statement of the Problem

In our school system there is a disproportionate enrollment of female students in some of the major program areas of vocational education. The Education Amendments of 1976 (Public Law 94-482) charged each state to develop and carry out programs to overcome sex bias, sex discrimination and sex stereotyping in vocational education and to promote equal educational opportunity for both sexes.³ Presently, there is little evidence to show that enrollment figures have changed significantly, if any.

Purpose of the Study

The major purpose of the study was to identify perceptions of educational personnel toward influencing the enrollment of females into non-traditional vocational education programs. A secondary purpose was to determine if there was congruence of those perceptions among educational personnel.

²Marilyn Steele, Women in Vocational Education: Project Baseline Supplementary Report, Washington, D.C.: Technical Education Research Centers, Inc., 1974, p. 132.

³Education Amendments of 1976, U.S. Code, Vol. 20, Sec. 2657 (1976).

The specific purpose of the study required answers to the following questions:

1. How do state directors of vocational education perceive factors influencing the enrollment of females into non-traditional vocational education programs?
2. How do state sex equity coordinators perceive factors influencing the enrollment of females into non-traditional vocational education programs?
3. How do presidents of state vocational associations perceive factors influencing the enrollment of females into non-traditional vocational education programs?
4. How do state directors of counseling perceive factors influencing the enrollment of females into non-traditional vocational education programs?

III. HYPOTHESES

The following null hypotheses were tested in this study:

H_1 : There are no significant differences between the mean perceptions of state directors of vocational education and state directors of counseling.

H_2 : There are no significant differences between the mean perceptions of state directors of vocational education and state sex equity coordinators.

H_3 : There are no significant differences between the mean perceptions of state directors of vocational education and presidents of state vocational associations.

H₄: There are no significant differences between the mean perceptions of state directors of counseling and state sex equity coordinators.

H₅: There are no significant differences between the mean perceptions of state directors of counseling and presidents of state vocational associations.

H₆: There are no significant differences between the mean perceptions of state sex equity coordinators and presidents of state vocational associations.

IV. IMPORTANCE OF THE STUDY

A desire to examine the perceptions of factors as perceived by certain groups influencing females in making career choices is appropriate and pertinent to current needs. Although the Education Amendments of 1976 authorized funds to eliminate sex discrimination and sex stereotyping in the Nation's schools, the problem still exists. According to a recent federal study completed by Kane and Frazee,⁴ the enrollment figures still project the same picture. That is, few women are enrolled in non-traditional programs. Lewis, et al. asked the question, "Has vocational education served females adequately?" Their findings report "that while young women were

⁴Roslyn D. Kane, and Pamela E. Frazee, Women in Non-Traditional Vocational Education in Secondary Schools (U.S. Department of Health, Education and Welfare, Bureau of Occupational and Adult Education, May 1978), p. 23.

well-prepared for a few occupations, their choices were limited by prevailing stereotypes that restrict the vocational concepts of young girls. Few jobs are perceived as appropriate, and even these are considered subsidiary to the real female roles of wife and mother."⁵

In order to provide vocational program planners, educators, and administrators with relevant information regarding choice of programs, it becomes necessary to identify those factors that are most influential in obtaining enrollment of females into non-traditional vocational education programs. Through various studies some of these factors have been identified but little has been done with the information acquired. Enrollment figures still project the same image; males and females both enrolled into traditional vocational programs.

Women, who comprise 37 percent of the work force, are concentrated in three fields of employment: teaching, health and office occupations. Although they work because of economic need, they earn only 60 percent of the average wages paid to men. According to a National study published in 1974 by Steele, schools at all levels are operating separate vocational education programs for women. Limiting girls to traditional, female-intensive offerings perpetuates and contributes to restricted job opportunities and lower earnings

⁵Morgan V. Lewis and Lynne W. Kaltreider, Attempts to Overcome Sex Stereotyping in Vocational Education (Institute for Research on Human Resources, The Pennsylvania State University, University Park, Pennsylvania 16802, November 1976), p. iii.

for women graduates. Although women comprise 55.5 percent of total vocational education enrollments and two-thirds of all secondary vocational enrollments, they are concentrated in non-wage earning home economics, and in health and office occupations, fields in which they are most prevalent in the world of work.⁶

The researcher is hopeful that this study will cause all educational personnel to examine vocational education programs closely, asking themselves, "How well are we serving all students?" By studying the perceptions of factors that are influential toward increasing enrollment into non-traditional programs, for females particularly, educators may find successful methods for changing present enrollment figures as well as providing a support system for a long awaited career decision-making process.

The present study not only provides support for why programs are being chosen but may give insight into why they are not. Therefore, increasing options for females becomes a very clear objective and goal. Hopefully, such a study will have a direct bearing on initiating change by studying those perceptions and viewing present vocational education programs. Reinforcement should occur toward the following:

1. Aiding in curriculum planning, instructional methods, and materials and procedures,

⁶Marilyn Steele, Women in Vocational Education: Project Base-line Supplementary Report (Washington, D.C.: Technical Education Research Centers, Inc., 1974), p. i.

2. Providing the need for support of vocational as well as academic or general teachers,
3. Encouraging cooperation between local directors and all teachers,
4. Emphasizing the importance of consultation of guidance counselors,
5. Clarifying the need to inform parents of programs available to all persons,
6. Actively recruiting the enrollment of females into non-traditional vocational education programs, and
7. Aiding in eliminating sex stereotyping in vocational education programs.

V. DELIMITATIONS AND LIMITATIONS OF THE STUDY

The population of the study was delimited to the perceptions of all 50 state directors of vocational education, to the perceptions of all 50 state directors of counseling, to the perceptions of all 50 sex equity coordinators, and to the perceptions of all 50 presidents of state vocational associations.

The study was limited by the background of those members in the study groups in completing the questionnaire, to use of the questionnaire through economic necessity, and to dealing with perceptions rather than true factors.

VI. DEFINITIONS OF TERMS

The following terms were used in this study and are defined for clarification:

Non-traditional refers to those courses or programs which are not typical for their sex: e.g., males to home economics or females to vocational agriculture. The judgment of local program enrollment patterns were relied upon to determine whether a program was non-traditional for females or males.

Occupation is defined as a vocation or job; the work in which one is engaged for earning a livelihood.

Sex bias is defined as behaviors resulting from the assumption that one sex is superior to the other.

Sex discrimination refers to any action which limits or denies a person or group of persons opportunities, privileges, roles or rewards on the basis of sex.

Sex stereotyping refers to any attributing behaviors, abilities, interests, values, and roles to a person or group of persons on the basis of sex.⁷

Traditional refers to those courses or programs which are typical for their sex: e.g., males to agriculture or females to home economics.

⁷Education Amendments of 1976, Public Law 94-482, Section 101 of the Act, Regulation 104.73.

Vocational center is facility used exclusively for the instruction of vocational programs.

Vocational education is public instruction that develops the basic skill, judgment, and job entry-level knowledge sufficient to prepare youth for employment in agriculture, business, distribution, homemaking, trade, industry, and other occupational areas.

VII. ORGANIZATION OF THE STUDY

Chapter I includes an introduction, statement of the problem, purpose of the study, hypotheses, importance of the study, delimitations and limitations of the study, and definitions of terms used in this study. The organization of the study is also included.

Chapter II contains the results of the review of related literature and germane research.

Chapter III presents the methodology and procedures used in population selection, instrumentation development, data gathering techniques and methods of data analysis.

Chapter IV contains the presentation and the discussion of the data collected for the study.

Chapter V concludes the study by presenting a summary, the overall findings, conclusions derived from the study, and recommendations of the study.

CHAPTER II

REVIEW OF RELATED LITERATURE

I. INTRODUCTION

National interest was clearly expressed concerning sex stereotyping and sex bias in vocational education programs in the Education Amendments of 1976. Such a problem became evident when Congress appropriated \$50,000 for each state to be used for the express purpose of eliminating sex stereotyping and sex bias in vocational education programs.

In 1974 the National Advisory Council on Women's Education Programs was established by Congress with a mandate to advise federal officials on the improvement of educational equity for women. Women's inability to enter non-stereotyped vocational education and training is a major cause of the concentration of women in low paying, low status jobs. Therefore, further action was needed to insure women a greater opportunity for entering the labor market and competing confidently for available jobs.⁸

The Vocational Education Act of 1963 was considerably amended by the Education Amendments of 1976 (Public Law 94-482). A major purpose of the revised Act was to develop and carry out programs to

⁸Hearings Before the Subcommittee on Elementary, Secondary and Vocational Education of the Committee on Education and Labor, House of Representatives, Sex Discrimination and Sex Stereotyping in Vocational Education, 94th Congress, First Session.

overcome sex bias, sex discrimination and sex stereotyping in vocational education and to promote equal educational opportunity for both sexes (Section 101 of the Act, 104.2 of the regulation). The 1976 Act marks the first time that federal legislation has specifically addressed the need of women and girls for equal access to vocational education and job training. The Act provides a variety of measures to improve significantly the vocational preparation of women and girls and to update their status in the labor market.⁹

At the National level, the Office of Education is directed to conduct studies and administer grants to states and private groups for a variety of purposes. States are required to spend at least \$50,000 in each fiscal year for full-time personnel, labeled as Vocational Education Sex Equity Coordinators, to work for the elimination of sex bias in vocational education.

A five-year plan is required of all states describing the vocational education programs to be provided. The plan must detail the steps the states will take to eliminate sex bias, sex stereotyping and sex discrimination in vocational education programs. Public hearings must also be conducted by each state throughout the region of that state. The Act, for the first time, requires the inclusion of a wide range of agencies and individuals within the state in planning and developing vocational education goals and programs.

⁹Women's Education Advisory Council, "Sex Bias and the Vocational Education Amendments," School Shop, January 1979, Vol. 38, No. 5, pp. 21-23.

Women must also be included in advisory councils for each state. The Act insures that some resources will be devoted to their needs and remedies the traditional lack of representation of women and minority women on state advisory councils and in the vocational education planning process.

Much of the following related research has been written since the implementation of the Vocational Education Amendments of 1976. However, as is evidenced by the information available, there is still a great deal to be accomplished in this area.

An overview of significantly related items is provided in the following sequence: Research Studies, Articles, and Conference Proceedings.

II. RESEARCH STUDIES

Women in Non-Traditional Vocational Education in Secondary Schools

Kane and Frazee study. The purpose of the Kane and Frazee study was to determine the factors that influence a woman's decision to select non-traditional training at a secondary vocational school; how those factors differ from factors that influence women to select traditional training and what problems women enrollees experience in non-traditional training. The focus of this study deals with women who were enrolled in vocational programs to prepare for jobs previously held primarily by men. Programs were defined by the number of men and women in each course and also by the stereotypes of their occupational skills.

Non-traditional programs were defined as those in which 0.0 percent to 25.0 percent of the enrollees nationally were women. Traditionally programs were those in which 75.1 percent to 100 percent of the enrollees nationally were women. Mixed programs included 25.1 percent to 75.0 percent of the enrollees nationally being women.

The sample included 1,062 non-traditional, 1,006 mixed, and 1,002 traditional women from 156 schools in 36 states. In some states no sample could be found due to the lack of secondary vocational education offerings. The sample represented the metropolitan and non-metropolitan break as defined in the U.S. Census. Included in the metro areas were schools in central cities, suburban counties, and the Standard Metropolitan Statistical Area (SMSA). The non-metro areas included small cities, which under the urban/rural definition would be urban. Many of the vocational schools in these small cities served one or more counties that were predominately rural making the metro/non-metro designation an appropriate description of the data base.

Survey instruments were distributed to the sample of women. Information was computerized and analyzed from the returned surveys. Also included in the study was a sample of educational personnel named by the non-traditional women as being very influential.

Among those persons being influential were mothers, fathers, school personnel, female friends and counselors. It was concluded that of all persons having influence on women's career decision making, parents exert the most. This reflected that unless parents had a broad base of occupational information their role would likely

be that of supporting and encouraging rather than actually assisting women in career decision making. Educational personnel, mainly male vocational teachers, influenced women in non-traditional programs. This issue is predominately a result of the sex of vocational education teachers.

Career education, career orientation and job site visitations were the counseling techniques that were positively received by traditional, mixed, and non-traditional women. Only about 27 percent considered individual counseling of value. None of the women considered vocational testing useful in career decision making, although traditional women were influenced more than non-traditional. Group counseling was not viewed favorably. Educational personnel considered all techniques as being somewhat useful. The writers consider career orientation, career education, and job site visitation an important finding and each offer a real involvement of the student in decision making. Group counseling was not considered as helpful. The writers recommend serious consideration be given to re-designing counseling programs to shift funds and produce models that would be more useful.

Interest was the single most powerful motivation influencing three-quarters of the traditional and non-traditional women with two-thirds of mixed women naming it as an important influence. Among those women who planned to work, those with high interest motivation planned to work in the area of training. The second most important motivating factor was ability for all groups. Earnings were the

least powerful motivating force for non-traditional and traditional: mixed women were more influenced. Viewing these motivations Kane and Frazee recommended exposure to a variety of occupations along with adequate information at an early stage to stimulate interest so that the opportunity to test and develop abilities in certain areas of interest can be provided. When earnings were used as a motivating force it was suggested the characteristics of the students be considered.

This study confirms the fact that math and science are not perceived to be a critical problem for women preparing for non-traditional, non-professional occupations. The findings revealed that women who intended to enroll in an academic program post-secondary took more math and science than do women who intended to enroll in post-secondary vocational programs or who intended to work.

Problems and difficulties encountered by non-traditional women were related to men in their classes, not their teachers. They felt that (1) men had difficulty adjusting to women, (2) men were better prepared, and (3) teachers expected more of women.

Employment presented some problems for the non-traditional women. Only 18 percent were employed in their area of study. Non-traditional women considered technical occupations as alternatives and all three groups considered mixed occupations.

Data were presented in summary form. Brief summary tables for the non-traditional and traditional group differences were shown. Straight counts of student responses to each variable with three or

more optional responses were tested for validity of the hypothesis using the chi-square statistic. Those with less than three response options were tested to determine if the difference between two proportions was significant.

The Kane and Frazee study was related to the present study by helping to identify factors that were influential to girls in making career decisions. This study was extremely beneficial to the researcher in verifying the influentials used in the survey instrument. Shown also by the Kane and Frazee study was the need for further investigation of the actions being taken as a result of the 1976 Education Amendments (Public Law 94-482).

Attempts to Overcome Sex Stereotyping in Vocational Education

Lewis study. The Lewis study was concerned with ways to increase occupational opportunities for women. It was planned and conducted in order to identify steps that can be taken to encourage young women to enter vocational areas that have been traditionally limited to males.¹⁰ Originally the study set out to locate ten "pacesetter" secondary schools that had specific procedures or programs designed to encourage females to consider entering traditionally male occupations. Since it did not locate any but found 11 vocational and comprehensive schools that had enrolled at least

¹⁰Morgan V. Lewis and Lynne W. Kaltreider, Attempts to Overcome Sex Stereotyping in Vocational Education, Institute for Research on Human Resources, The Pennsylvania State University, University Park, Penn., November 1976, p. 1.

five females in one or more non-traditional courses. However, these females were not enrolled in "hard core" male programs such as construction, metalworking or automechanics but in gray areas such as vocational agriculture, printing, industrial chemistry or television arts.

Schools were visited, classes with females observed, and teachers of these classes interviewed. A total of 1,014 permission forms were distributed with 51 percent being collected. The questionnaires focused on attitudes, experiences, and career plans. Also requested was information on household tasks students performed and toys the students played with as young children. Parents of those students completed questionnaires which asked about their education, occupation, attitudes toward male and female roles, and also included questions about their children. Sixty-seven percent were obtained.

Very little of the information collected on family background indicated that the experiences of the non-traditional students differed greatly from those of traditional students.¹¹ One aspect of family background that differed concerned the awareness of parents. The parents of non-traditional females seemed to have more knowledge about and be more supportive of the career choices of their daughters than the parents of traditional females.

Three-fourths of the students rated school initiated guidance activities or personal discussion concerning course choices as being

¹¹Ibid, p. 4.

a little helpful. Most reported having made independent course choices as a decision to study things of personal interest or a way to prepare for employment or post-secondary education.

None of the teachers or counselors interviewed reported that they encouraged students to consider non-traditional occupations. In fact, "probing" took place to be sure the interest was serious.

The study revealed that female applications were rejected by counselors on the grounds that one female in a shop might be disruptive. There was little resistance to having females in their classes by teachers interviewed but neither was there much enthusiasm.

Those females choosing non-traditional courses generally reported having positive experiences in them. They felt accepted by teachers and classmates and found the courses to be interesting. Taking non-traditional courses was not associated with increased unemployment. However, the types of jobs students obtained did differ. More professional, technical and semi-skilled jobs were obtained by non-traditional females. Only about one-third of the respondents found jobs that were related or highly related to the skills they studied in high school. Even so, three-fourths of the respondents were satisfied or very satisfied with their jobs. After graduation male students tended to work more often than females and received higher pay.

Few of the students saw themselves doing anything special. Most of them, traditional or non-traditional, did not have strong vocational goals.

The Lewis study related to the present study by suggesting ways females in vocational education could increase their occupational opportunities. The influence that school personnel have on secondary females were made known. Information regarding other influentials was also given. Lewis's study was also related to the present study in that a Likert-type scale was used.

Barriers to Enrollment in Post-Secondary Vocational Technical Area Education (VTAE) Programs in Wisconsin

Smeaton study. The purpose of the study was to discover the barriers which prevent high school graduates and adults from furthering their education by enrolling in and actually attending a post-secondary program at a Wisconsin VTAE school. The study included both males and females.

Surveys were sent to persons who applied but did not attend in the 1974-75 school year. They were also sent to recent high school graduates who had indicated on the 1975 Wisconsin Senior Survey that they were interested in attending a vocational-technical school.

Four hundred and forty surveys were sent to potential students in the 1975-76 year. One hundred ninety-eight returned them for a response rate of 45 percent.

Those names who applied but did not attend were listed under the heading application were 57.0 percent male and 43.0 percent female. Those names obtained from the surveys and listed under the heading no application were 37.0 percent males and 63.0 percent females.

Two-thirds of the no application were females indicating a lack of program choice or lack of encouragement or desire to enter the preponderantly male-oriented programs at Southwest Tech. Ninety three percent of the respondents were under the age of 25. Eighty seven percent of the respondents had finished high school. "The programs were the ones I wanted" was the greatest reason for choosing a particular school followed by "the school was close to home" and "the cost was reasonable."

The study made the following recommendations:

1. Apprenticeships are generally all-male. The school should actively and seriously encourage women to take apprenticeships.
2. Scholarships or grants should be offered to encourage males and females into non-traditional occupations.
3. Program makeup should be studied to induce them into a reasonable balance of male-female enrollment.
4. Attitudes of counselors and teachers should be studied regarding this subject.
5. Students should be counseled into areas that interest them but also fit their abilities.
6. Curriculum development should continuously be aware of the need for a program.
7. High school graduates need goal development. More emphasis on career exploration could be offered.

Vocational technical schools should develop better relations with high schools, provide additional job information and followups

that could help high schools better serve their students. They should also consider a Student Services newsletter to be mailed to high schools.

Smeaton's study addresses the problem of barriers to high school graduates furthering their education, specifically in vocational education. The relationship between the Smeaton study and the present study is evidenced by information given regarding reasons for enrollment figures.

Vocational Education Sex Equity Strategies

Vetter study. Strategies and techniques for increasing sex fairness in vocational education are provided in this guide designed for sex equity personnel, instructors, administrators, counselors, and curriculum planners. Eight chapters of information are provided and are generally organized into the following format: introductory questions, narrative, references, reprints, and exercises. Topics include creating sex fairness concerns, dealing with sex bias, recruiting students for non-traditional classes, retraining students in non-traditional classes, interacting with the community, assessing and adopting materials, and program planning (needs assessment, local flexibility, legislative compliance, and funding). The final chapter contains an annotated bibliography organized into five categories: (1) separate publications (books, reports, packages), (2) journal articles, (3) papers from professional meetings, (4) newsletters, and (5) audio-visuals.

The problem as it relates to vocational education: to a certain extent, occupational sex segregation is caused by discriminatory labor market practices which are slowly crumbling under legal and social pressures. The problem has also been traced to self-concepts and societal pressure shaped by the practice of sex bias and sex stereotyping through several generations.

While data are incomplete, it would appear that the under-supply of qualified men and women for non-traditional occupations may be particularly severe in the skilled trades and in the work for which vocational education is preparatory. For example, 77.2 percent of clerical workers were women, and 95.8 percent of the craft and kindred workers are men (Women's Bureau, 1975). Workers in both these major occupational groups are frequently vocational education graduates.¹²

Vetter calls attention to author Jo Ann Steiger, in her article, "Broadening the Career Horizons of Young Women Against Traditional Single-Sex Enrollment Patterns in Vocational Education" (Reprint 1-B),¹³ who makes it clear that vocational education is sex-segregated. Nearly 100 percent of agriculture teachers, 98 percent of technical education teachers, over 89 percent of Trades and Industrial teachers and over 77 percent of Distributive Education

¹²Louise Vetter, et al., Vocational Education Sex Equity Strategies, Research and Development Series, No. 144, Ohio State University, Columbus, Ohio, National Center for Research for Vocational Education, 1978, p. 3.

¹³Ibid., p. 4.

teachers were men. Conversely, over 98 percent of home economics teachers, 88 percent of health occupation teachers, and over 71 percent of office/business teachers were women.¹⁴

The author emphasized the importance of recognizing that sex bias need not be blatant or malicious before it can be damaging. Expressed were two kinds of barriers which perpetuate occupational sex-segregation in vocational education curricula. The first was the obvious kind: promotional brochures and instructional materials geared for one sex only, availability of physical facilities (dorms, restrooms, etc.) for only men or only women, instructional staff composed all or primarily of one sex only or admission requirements which strongly favor one sex or the other. The other kind of barrier is far more subtle and is often difficult to detect. The subtle and pervasive stereotypic expectations of what is "appropriate" sex role behavior for girls and boys can be a powerfully negative force which limits the opportunities and, therefore, the growth of students. Ability to recognize these attitudes, to see how they may be expressed in actions, and to clarify the difference between public responsibilities and private opinions, along with the elimination of overt barriers, will make a great deal of difference to the success of men and women who enter training in non-traditional programs.

One of the most difficult situations in implementing sex fairness in vocational education is working with people who do not believe

¹⁴Ibid., p. 37.

there is a problem or see no need to change. The more powerful these people are, the more critical the need is to inform them.

The Vetter study expresses a similar concern of the present study. That concern being that people in vocational education need to be informed of techniques and strategies that may be useful in eliminating barriers to their programs.

Measures of Educational Equity for Women: A Research Monograph

Williams, et al. study. Sixty-one measurement instruments, all of which have at least minimal reliability and validity are described. They were carefully selected and cross-referenced according to their correlation with the most common needs, goals, and content areas of multi-year projects funded in 1976 by the Women's Educational Equity Act Program (WEEAP). These tests included: (1) instruments appropriate for evaluating results of the three major types of projects funded under WEEAP--projects to develop and validate programs, curricula, and materials, to effect institutional change and reforms, and to conduct staff development, (2) instruments appropriate for evaluating results in content areas common to projects funded by WEEAP, including career development, occupational/leadership/training, self-concept, sex stereo behaviors, sex stereotyping awareness, sex stereotyping, (3) instruments representative of the following types of measurement: questionnaires and interviews, rating scales, observation, unobtrusive measures, attitude scales, social indicators and content analysis, and (4) instruments containing

appropriate development and/or background information. Guidelines for selecting and using the tests are included.

The Women's Educational Equity Act (WEEA) was passed as part of the Special Projects Act of the Education Amendments of 1974, Public Law 93-380. Authorized under this act is "an extremely broad range of activities that target on every area of education that perpetuates sex bias and thereby opens many avenues to carry out the purpose of providing educational equity for women."¹⁵

The monograph is organized in four sections. The first section describes the development and validation procedures used by American Institute of Research (AIR) in the design and preparation of the instrument package that was the basis for this monograph. The second section provides suggestions and examples of how individual projects might use this monograph.

The third section is an index that cross references all the instruments described in this section by project type, content area and target population. The last section contains the descriptions organized alphabetically by title of the measure.

Instruments to be used by different projects will vary according to the purpose of the project. Various instruments to be used will also vary according to the type of project or goal to be achieved.

¹⁵U. S. Department of HEW, Women's Educational Equity Act, First Annual Report, September 30, 1976.

The Williams et al. study resembles the present study in that both are concerned basically with the same group of people being surveyed. Both are aimed at identifying ways of increasing female enrollment in vocational education.

Women in Vocational Education

Steele study. The study determines whether there is a cause-effect relationship between school practices and limited job options for women in the world of work. According to their review and analysis of available data, the authors project that schools at all levels are operating separate vocational educational programs for women. By limiting girls to traditional female-intensive offerings, restricted job opportunities and lower earnings for women graduates are being perpetuated. In their findings, women comprised 55.5 percent of total vocational education enrollments yet they are concentrated in non-wage-earning home economics and in health and office occupations. Consumer and homemaking programs, which do not provide job skills, have 25 percent of female enrollment. Occupational home economics, involves 2 percent of females in Vocational Education, leads to low-paying, dead-end jobs. Post-secondary education concentrates women in either technical programs of short duration or in health or office occupations. At the college level, 36 percent of all bachelor's degrees granted to women are in education. Those degrees receive wide dispersion except for educational administration, physical education, driver and safety education, industrial arts, vocational and

vocational-technical education, and agriculture education. Women faculty are limited to 20 percent of the total in higher education. Evidenced by a paucity in school administration it is apparent women are being discouraged to prepare for vocational administration. The higher the grade level, the fewer the women both in the classroom and in administration. Women comprise only 0.01 percent of school superintendents and there is only one female State Director of Vocational Education for the year 1979-80. Few women are appointed or elected to state or national policy and advisory boards. Textbooks, teaching practices and extra-curricular activities continued to discriminate against girls. Counselors continue to reinforce stereotypes of "appropriate" jobs for women.

Vocational schools primarily are preparing young women for the traditional role of homemaker rather than wage earner with a wide variety of job options.

In this study it was recommended that additional women be hired to serve as faculty in departments of school administration and vocational education and that teacher institutions encourage and prepare more women to enter administration. Active recruitment of both young women and men to home economics and industrial arts classes should take place in order to desegregate.

Performance competencies should be established in order to enable both men and women to assume the dual role of homemaker-wage earner. Educational materials should portray women and men in non-traditional roles and occupations. The study also recommends that

inservice training programs be used to create awareness of sex-role-stereotyping among teacher trainers and practicing teachers. Recommendations that counselors increase their knowledge and experience of the work world in order to inform female students about the wide range of job opportunities available, especially in higher paying, male-intensive occupations.

Due to economic needs, women work and contribute two-fifths of the family income. Quite often this determines the difference between poverty and middle incomes for their families. In order that women receive equal opportunities for employment, pay, and promotion, vocational programs must prepare young women for a broader range of occupations.

The Steele study interviewed guidance counselors as a means of obtaining their information. The present study is related because it was felt that guidance personnel were important influentials in aiding secondary females in career decision making.

Expanding Non-Traditional Opportunities in Vocational Education

Ellis study. This study addresses the need to expand non-traditional opportunities for vocational education students. It contains three separate training packages intended for use in pre-service and inservice training of vocational teachers, counselors, and administrators. Emphasis is on opportunities for secondary and post-secondary students. The document is divided into three sections. The first section is entitled "Approaches to Expanding Non-Traditional

Opportunities for Vocational Education." Included in this section are: (1) why women should enter male-dominated occupational fields, (2) identification of fields that offer the greatest opportunities for men and women, and (3) how to recruit students into non-traditional areas. Section II provides information on barriers and their nature to equal vocational opportunity as well as discussing additional problems of minority women wishing to expand their career options. Section III presents legislation while addressing equal opportunity in vocational education and employment.

Emphasized was that recruitment of students into non-traditional programs is the responsibility of all vocational educators in a school or school system, and that every vocational educator has a role to play in exposing all students to all vocational options, and helping all students realize the personal freedom to pursue occupations of interest.¹⁶

The Ellis study relates to the present study as it addresses the need to expand non-traditional opportunities. The studies are also similar as they both were concerned with the actions of educational personnel.

EVE: Equal Vocational Education

Lerner et al. study. The objective of the project was to develop a model that would increase and maintain female enrollment

¹⁶Mary Ellis, Expanding Non-Traditional Opportunities in Vocational Education, Ellis Associates, Inc., College Park, Md., June 1977.

in vocational programs throughout Texas. Included in that objective was to provide information about educational and career opportunities available through vocational education. An integral part of the project was informing parents, teachers, and the community about the good jobs for women traditionally held by men. Improving the image of vocational education became important so that all would see what a viable alternative it was to traditional academic courses.

Sam Houston High School became the demonstration school. A program for recruiting students was presented through the tenth grade English classes. After the presentation, students were assessed of their vocational education knowledge. They were then taken on a tour of the vocational programs and facilities. The students were given a brief course description, pay scales for entry-level jobs as a result of the training and an opportunity to ask questions.

As a result, students requested more information, were given interviews and some decided to sign up for a male-dominated course. Each girl was observed in order to keep the project staff up to date and help to avoid problems before they actually arose. Girls in these classes openly discussed their problems with the staff. Constant communications were kept with the teachers who taught these girls.

Girls in vocational programs have generally been confined to areas that either do not prepare them for employment or prepare them only for low-paying, dead-end jobs. Many educators have become

increasingly aware of this problem and have been seeking solutions to it.¹⁷

In order to evaluate the effectiveness of the project activities, a student questionnaire was administered before and after activities took place. The results of the pre-test given showed a considerable lack of information on the part of the girls about the labor market and their own futures in it.

Programs were also conducted at junior high schools which fed into the demonstration high school. All of the presentations were very successful. The materials were effective with both boys and girls.

Female enrollment in non-traditional vocational programs increased where EVE presentations were made. The project staff recommended that all female students throughout the State of Texas be exposed to the materials and exercises of the program.

The studies are similar in that both are interested in encouraging enrollments of females into non-traditional vocational education programs. They differ because the Lerner et al. study provides a model for achieving its purpose and the present study provides perceptions of educational personnel regarding the problem.

¹⁷Jane Lerner, Fredell Bergstron, and Joseph E. Champagne, EVE: Equal Vocational Education, Center for Human Resources, University of Houston, Houston, Texas, 1976.

III. CONFERENCE PROCEEDINGS

A National Study of Sex Stereotyping and Discrimination in Vocational Education

This paper reviews the reasons that led to the congressional mandate in 1976 for a national study of sex discrimination and stereotyping in vocational education and of the progress being made to reduce existing inequities and discusses the goals and methodology of the study, which is presently being conducted. First, in an introduction to the problem comparisons are drawn generally between the salaries and career positions of working men and women, and an analysis is given of the number of women employed and their educational backgrounds. The role of vocational education as a contributing factor in career choice and its potential impact for effectuating change is examined. Having established the need for such a study, the author turns next to a description of the study itself. The purposes and contents of the interim and final reports are anticipated--the methods used for sampling and data collection are delineated. After justifying the choice of interviewing as the best technique, the author listed the categories of persons to be questioned and explained the scope of the information sought.

While Title IX prohibits a variety of forms of discrimination, the current amendments (1976) mandate the development of programs to overcome sex stereotyping and discrimination in vocational education programs and authorize the states to use federal monies for this purpose.

Harrison's question that needed an answer was: "What led Congress to include such specific provisions in the amendments?" She believed the problems of sex discrimination and stereotyping in vocational education and in hiring and promotion policies in the labor force have been pointed out repeatedly, including during the hearings before the House Subcommittee on Elementary, Secondary, and Vocational Education in March 1975. Statistics show that in 1975 females constituted slightly over half of vocational education students--42 percent homemaking and consumer education courses, 26 percent office-work related courses. In health courses 92 percent were females--only 14 percent constituted in mechanical and engineering technology.

Vocational education is one of the major trainers of workers at less than the baccalaureate degree level. The decisions which students made and are assisted to make concerning the type of vocational training they will pursue can effect the remainder of their working lives.

The choice for vocational education is either to perpetuate the stereotyping and resultant inequities, or to play an active role of support and encouragement in fostering equal access to all occupations for which vocational students train. Vocational education has the opportunity to make a genuine impact on a situation that has long been in need of correction.

The purpose of the study was to develop and present a status report on the existence of sex discrimination and stereotyping in

vocational education and to identify the progress which has been made in the reduction of inequities.

All 50 states and the District of Columbia were visited in a random sample of 100 vocational schools from the secondary to post-secondary level. Interviewing was selected as the method of choice. It was limited to 100 because of the concern for data burden.

Interview instruments developed for collecting data included: State Division of Vocational Education Interview, State Education Agency Personnel Interview, Local Education Agency Personnel Interview, Vocational Education Instructor Interview, Counselor Interview, Organizations (Apprenticeship, Advocacy, and Union Groups) Interview, Vocational Education Student Interview and Questionnaire, and Staff Attitude Questionnaire.

During the interviews, practices and policies at the federal, state, and local levels will be examined in order to see which facilitate and which hinder, equal access to all training areas. The data collection will also focus on attitudes toward sex inequalities and appropriate roles and responsibilities for men and women. Additionally, vocational education's interface in the community and parents and employers in particular will be examined. Finally, the interview instruments will seek information on perceptions of the greatest constraints to equity in order to make recommendations for future action.

The study presented a state of the art assessment of sex stereotyping and discrimination in vocational programs, and of

practices and policies which were being implemented to make progress in reducing inequities. The intent was to make the results of the study useful to administrators and practitioners at all levels.

The study substantiated the belief of the present study in that discrepancies in the hiring and promotion policies of the labor force were reinforced by vocational education at the secondary level. The Harrison study was also similar as some of the same objectives were present.

IV. ARTICLES

"Stamping Out Sex Stereotypes in North Carolina"

Smith. The New Pioneers Project to eliminate sex stereotyping in vocational education began in July 1976. Twenty months after the program began, increases in programs were as follows: (1) agriculture--one thousand more girls, (2) trades and industry--700 more girls, (3) farm production--381 more girls, (4) bricklaying--an increase of 77 more girls, and (5) carpentry--136 more girls.

Boys also were making new choices. Thirteen hundred more were in home economics plus others.

The project in North Carolina carried three themes: (1) life-time planning for everyone, (2) options for everyone, and (3) the needs of disadvantaged girls. Girls plan for the years of young motherhood, overlooking their roles as wage earners. They are unaware that nine out of ten American women will work for a good period of their lives outside the home. Boys are more likely to

plan for their careers, overlooking their roles as husband, father, and joint homemaker.

The entire system was involved in the project. Teachers were trained at a summer institute to serve as resource people and to teach certifiable renewal credit courses on sex bias in education.

All occupational education consultants in the state department attended workshops on the subject of sex bias in vocational education and then prepared a plan. Rewriting course descriptions, working with publishers, working with teachers to insure that facilities served both sexes as well as publicizing successful efforts was included.

Active recruitment of girls by trades and industry, industrial arts, and agriculture programs received emphasis. This was countered by active recruitment of boys into non-traditional programs.

Production of a filmstrip entitled "I'm Glad I'm a She, I'm Glad I'm a He" pointed out behavioral differences and unconscious patterns of differences to girl and boy reactions.

Good publicity was found to be vital to success. It helped alleviate peer pressure.

This study was summarized in the VocEd journal as well as being published in its entirety as a study. For purposes of this study the article was reviewed.

The Smith study related to the present study by also addressing the problem of sex stereotyping at the secondary level. The studies differed in their approach to deriving a workable solution.

"Wanted: A More Realistic Educational Preparation for Women"

Zuersher. Although women constitute more than two-fifths of the labor force and more than 60 percent of the women who work do so for economic need, they are clustered in low paying jobs. The author believes this is because of the differing role expectancies for men and women in our culture. Young women generally do not take their occupational role as seriously. They are not made aware of the likelihood of future employment and cultural expectations lead them to believe their role in the work world will be brief or sporadic.

While legislation has opened opportunities for employment in traditionally male occupations, women are not prepared because they have not received the proper training to enter these fields.

Zuersher recommends that two changes are necessary in our educational system to meet the needs of today's women students. She advocates that both the formal and informal curriculums must change. The author defines the formal curriculum as that which is planned and organized in an effort to impart knowledge, attitudes, and skills to the younger generation. The informal curriculum is defined as that which is learned tacitly through the attitudes and behaviors of teachers and peers; it contains hidden messages that ricochet throughout the schools, which in this case reinforce the culture's stereotypes.¹⁸

¹⁸Dorothy Zuersher, "Wanted: A More Realistic Educational Preparation for Women," Educational Leadership, November 1975, p. 120.

The author provides suggestions for change which include:

(1) differing sex role expectation discussions with students, (2) offering seminars to exposure of non-traditional roles, (3) providing access to all areas of study to both sexes equally, (4) forming a curriculum committee to review texts for sex-role stereotyping, (5) creating own curriculum materials, and (6) making sciences more interesting and attainable to women. The author also suggests that an exerted effort begin in elementary school.

Zuersher's article emphasized the need to change attitudes not only of the younger generation but of the teachers and administrators. The present study was similar as it provided information regarding feelings, perceptions or attitudes about females in non-traditional programs.

"The Equity Study Results and Recommendations"

Harrison. The following are the results of a study reviewed earlier as a conference proceeding by Laurie R. Harrison. In the spring of 1978, staffing and enrollment patterns were heavily stereotyped. All positions at the state level were predominately occupied by men with the exception of directors of home economics, directors of health occupations, and sex equity coordinators. Ninety percent of the local directors of vocational education were male.

According to the study females represent 12 percent of the enrollments in traditionally male agriculture and technical program areas, and 6 percent in traditionally male trade and industrial

programs. Compared with 1972 figures, these show no change for trades and industry but an 8 percent gain in agriculture programs and a 3 percent gain in technical programs. Male enrollment in home economics by 10 percent, from 7 percent to 17 percent. In traditionally female courses overall 10.9 percent of the enrollments are male; in traditionally male courses 7.8 percent of the enrollments are female.¹⁹

The study revealed that those schools where efforts were underway to make students aware of non-traditional course options and to alert them to inequities in the job market, there were significantly greater numbers of non-traditional students.²⁰

Although discriminatory practices for admission to a course have been practically eliminated, most staff feel that subtle forms of discrimination need to be changed. Such practices as having the counselor discourage non-traditional choices or teacher reluctance to have non-traditional students in their courses.

More than 70 percent of the students felt that males would prefer to be enrolled in classes that have mostly men, while 60 percent felt that females would prefer to be enrolled in classes that have mostly women.²¹

Females as a group display stronger pro-equity attitudes than males, and students enrolled in non-traditional areas (both males and

¹⁹Laurie R. Harrison, "The Equity Study Results and Recommendations," VocEd, April 1980, pp. 39-42.

²⁰Ibid., p. 39.

²¹Ibid., p. 40.

females) are more pro-equity than students in programs traditional to their sex. Non-traditional students are likely to be somewhat older than traditional students, and there are relatively more non-traditional students in post-secondary rather than secondary training programs. On most other variables, traditional and non-traditional did not differ, but there is some indication that non-traditional males have mothers working in slightly higher socio-economic status jobs. One might hypothesize that exposure to competent, working females makes a "traditionally female" career area a more plausible option.²²

Even though two-thirds of the states were implementing activities to review and analyze policies, programs and procedures, only 30 percent of the states were taking action to correct problems they uncovered. In other words, there was a greater effort in reviewing and monitoring than there was in action to overcome inequalities.

The study found 12 vocational education programs that were successful in reducing inequities. Although the programs have been developed in different locations for different types of students using different strategies, many common characteristics are used.

The Harrison study and the present study were both concerned with activities which would encourage the enrollment of females into non-traditional vocational programs. They differed because student perception was not involved in the present study.

²²Ibid., p. 40.

"Women's Lives, Women's Work: A Feminist Approach to the High School Curriculum"

Froschl et al. The purpose of this article was to explain a project The Feminist Press had developed. The authors explained in detail their reasons for believing the high school curriculum was in dire need of revision. Several researchers contributed facts from a number of history books used throughout the Nation by high school teachers; books which taught students very little about women and their place in society.

One of the project's main concerns was the portrayal of female characters in these books. Examined also were the number of male and female authors, the overall focus, the language and editorial comments, and the inclusion of minority women.²³ These books did not present women engaged in work outside the home although more than one-half of the female population is presently in the labor force. The authors used a study conducted by Mary Beavan²⁴ which revealed that there are few admirable female role models in the English curriculum.

The authors believed, after interviewing publishers, that there would be no overhaul of textual materials. Merely a cosmetic change would occur. In order to meet the demands of teachers not met by publishers, the project produced "Women's Lives, Women's Work" in

²³Merle Froschl, et al., "Women's Lives, Women's Work: A Feminist Approach to the High School Curriculum," Journal of Research and Development in Education, Vol. 10, No. 4, 1977.

²⁴Ibid., p. 2.

1976 which consisted of 13 paperbacks as readings for students, accompanied by teacher guides. Specific subjects such as language, the law, socialization and sex of marriage and families, sports and lives of black women were included.

The second series produced, "Women Have Always Worked," addressed work and women from different historical periods. This series proposed to give students a better view of the relationship between the needs of society and definitions of womens' work at specific times in history. Essentially, students would recognize more the function of women as a work force.²⁵

The Froschl et al. article was related to the present study in that it identified some of the same influentials of career decision making. Emphasized in the article was the need to provide role models for non-traditional females so that they may see themselves in more career roles.

"The Socialization of American Females as a Dysfunctional Process: Selected Research"

Berger. The family, peers, schools, and society at large, are socializing influences. The way in which these forces socialize the American female is dysfunctional because they fail to prepare her for an economic role in the labor force.²⁶ Women are expected to

²⁵ Ibid., p. 3.

²⁶ Gertrude Berger, "The Socialization of American Females as a Dysfunctional Process: Selected Research," Journal of Research and Development in Education, Vol. 10, No. 4, 1977.

play a partnership role as a marriage partner rather than that of a self-supporting, achieving individual who has value in the marketplace. Berger felt that women have been led to believe that their economic needs will be provided. She also expressed a belief that women fear success and very often contribute to their own failure.

Although women workers will increase from 39 million in 1980 to 42 million by 1985 their position in the labor force remains at the lowest end of the economic ladder.²⁷ The earnings gap between men and women, so stated the author, has continued to widen. In 1973, the differences rose to 57 percent of men's income. The author has projected that external and internal factors are responsible. Among those factors are job selection, preparation and certification, continuity and discontinuity of work experience, discrimination in employment practices, fear of success, low self-esteem and role conflict.

Berger quotes studies by Siegel and Tibbetts as providing evidence that role models or lack of role models have influenced children as early as the first grade. She felt that schools have played one of the most important roles in perpetuating the expectations of the female. As has been stated by other authors, Berger re-emphasized the influence readers and textbooks have had in the curriculum. Women have constantly been portrayed as having supporting roles, not those of leadership.

²⁷Ibid., p. 4.

Berger advocated counselors and guidance personnel stress the idea to women that work experience be a definite part of their planned life career, not just marriage and family. She substantiated a female's fear of success by citing additional studies done by Horner, Breedlove and Circirelli, and Dalsimer. These studies, in turn, supported by Winchel, et al. and Romer confirm findings that increased competition between males and females increased fear of success in females. The school environment appears to be a significant variable in arousing or minimizing fear of success.²⁸

The problem has been, the author insisted, with society. Since the schools are a significant contributory social force, schools and society have failed to educate females to become achieving individuals who will work 30 to 40 years in the labor force and must, therefore, hold strong vocational interests.

Berger expressed many influential factors in her article that the present study had used in the survey instrument. The article reinforced several items used.

"A Freer Choice: A Program for Equality Between the Sexes in Education and Schools"

Vestin pointed out that although the Swedish curriculum is rather radical in specifying what to teach, it has fallen short of successfully doing so. Her belief was that individual persons should

²⁸Ibid., p. 9.

be at liberty to exercise their rights and acknowledge their duties at home and in society, regardless of sex.

The author emphasized that boys and girls alike chose traditional courses respectively. The same picture was found in the labor market.

Vestin proposed a program to create change. That program included a special consideration to the use of language, promotion of technology and natural science for girls, the development of handicrafts (textiles and needlework as well as woodwork and metalwork) for both boys and girls, more instruction for both sexes concerning nursing and child care, and physical education--gymnastics and sports--adapted to co-education when needed and wished.²⁹

The author advocated that equal sharing of responsibility implies two things: the right to be given and to accept equal responsibility in the home, in working life and in public office, and the equal obligation to shoulder such responsibility.³⁰

Vestin proposed a program to involve teachers, parents, administrators and students. She believes that only with an active role in promoting equality of status for both men and women will change occur and even at that, very slowly. Vocational guidance

²⁹Margareta Vestin, "A Freer Choice: A Program for Equality Between the Sexes in Education and School," Journal of Research and Development in Education, Vol. 10, No. 4, 1977, p. 58.

³⁰Ibid., p. 54.

program at an early stage but only will it become effective if all the other influentials present different conceptions.

The program outlined in the book A Freer Choice--Equality Programme for Students has produced a positive attitude by the public. The school should serve as a model with equal job opportunities for both sexes.

The author contended that basic teacher training in the future must consider sex role problems within the school and the education system.

The article was similar to the present study by addressing a program to involve parents, administrators, teachers and students. Strength was also added to the study by advocating a strong vocational guidance program.

V. SUMMARY

A major portion of the related literature was concerned with ways to increase enrollment of both sexes into non-traditional areas of vocational education. Studies and articles directed emphasis to those factors that influence students to enroll and those barriers which prevent their enrollment.

Writer after writer showed that since the 1976 Education Amendments were mandated, very little progress has been achieved. Of all the related literature reviewed, only 12 vocational programs were found that were successful in reducing inequities. Although states

have been charged with eliminating sex bias and stereotyping in vocational education, the problem is still present.

Programs for increasing enrollment into non-traditional vocational education have included techniques and strategies for assisting administrators, teachers, counselors, and students, yet, statistics in the non-traditional areas remain largely the same.

Many authors used figures to show reasons why women, in particular, should be influenced and taught to achieve leadership roles, not always supporting ones. A consensus of opinion showed that schools have not been responsive to change. Vocational programs were charged with being segregated--of operating two separate programs--one for females and one for males.

A number of writers indicated that parents, teachers, counselors, and administrators exert a tremendous amount of influence--often to the extent of discouraging enrollment into non-traditional areas.

The literature revealed, overwhelmingly, the same influential factors that should be known to educational personnel, yet, the bulk of the writers feel any change is purely "cosmetic."

CHAPTER III

METHODOLOGY AND PROCEDURES

I. INTRODUCTION

The major purpose of this study was to identify perceptions of educational personnel which influence the enrollment of females into non-traditional vocational education programs. A secondary purpose was to determine if there was congruence of those perceptions among educational personnel.

II. METHOD OF RESEARCH

The design of the study is classified as a descriptive survey. It was assumed that state directors of vocational education, state directors of counseling, state sex equity coordinators, and presidents of state vocational associations would provide information to the researcher in order that conclusions based on obtained data could be applied to each group as a whole.

III. THE POPULATION

The population was composed of all 50 state directors of vocational education, all 50 state directors of counseling, all 50 state sex equity coordinators, and all 50 presidents of state vocational associations. Computer printouts provided by the Tennessee State Department of Education were used for identifying the population.

IV. INSTRUMENTATION

In order that the researcher conform to the objectives of this study, it was essential to develop or locate an instrument that would provide information identifying perceptions of educational personnel.

A questionnaire was developed for the purpose of eliciting perceptions. A five-point Likert scale was used as follows: 1 represented "not influential," 2 represented "somewhat influential," 3 represented "influential," 4 represented "very influential," and 5 represented "extremely influential."

The procedure for developing and validating the survey instrument paralleled a procedure described by Van Dalen:

To establish content validity, the test constructor analyzes the content of the factor that he intends to appraise and structures a representative instrument to measure the various aspects. . . . When checking content validity, the test constructor alone and with the aid of others judges the extent to which the test items present a representative sample of the universe of the content that the test is designed to measure.³¹

The instrument was submitted to a campus review committee for face validity, clarity, and appropriateness of items. Those names are included in Appendix A. After receiving suggestions from the committee, revisions were made. A pilot study was conducted involving a local Knox County high school which consisted of 25 persons involved in teaching, counseling, and/or administration. A

³¹Leobold B. Van Dalen, Understanding Educational Research (New York: McGraw-Hill Book Company, 1973), p. 337.

100 percent rate of response was recorded. The purpose of the pilot study was to establish further face validity of the instrument before carrying out the present study.

The Cronbach Alpha computer program was used to estimate the instrument's internal consistency reliability. An internal consistency reliability coefficient .96 was established.

The questionnaire was developed to elicit perceptions of educational personnel regarding factors that were influential toward females seeking to enroll in non-traditional vocational education programs. Fifty items expressed in studies reviewed in the related literature were selected and included in the questionnaire. These items were divided into four sections. Section I, items 1-18, pertained to school programs and personnel, Section II, items 19-35, to parent information and exposure to occupational information, Section III, items 36-45, to personal reasons for selection, employment or training possibilities, and Section IV, items 46-50, to classroom factors.

The questionnaire was designed to elicit perceptions of educational personnel as to how influential they would judge each item to be toward females in career decision making. The perception scales and directions for marking the scales are shown in Appendix B as they appeared on the questionnaire.

The questionnaires were numbered indicating to which of the four groups the questionnaire belonged: (1) state directors of vocational education, (2) state sex equity coordinators, (3) presidents

of state vocational associations, or (4) state directors of counseling. A record was maintained showing to whom the questionnaires were sent, when they were received, when a follow-up letter was mailed and when the response was received.

In order to increase the response rate of the questionnaires the following were completed:

1. Items were abbreviated as much as possible without altering the meaning in order to decrease the length of time involved in responding to the questionnaire.
2. Professional printing was employed.
3. A personal letter of transmittal was mailed with the questionnaire explaining the study, its importance and the importance of each respondent to the success of the study.
4. A follow-up letter was sent four weeks later to those participants not responding.

V. DATA COLLECTION

A personal letter of transmittal was sent to each of the 200 participants. This included the state director of vocational education, the state director of counseling, the state sex equity coordinator, and the president of the state vocational association for a total of four persons from each of the 50 states. A copy of the letter of transmittal sent to all participants is included in Appendix B. With the letter of transmittal was mailed the questionnaire. A copy of the questionnaire is included in Appendix B.

Mailed with the transmittal letter and questionnaire was a postage-paid, self-addressed envelope.

The names and addresses of state directors of vocational education were obtained from November, 1979 Directory of State Directors of Vocational Education. The names and addresses of the state directors of guidance were obtained from the Directory of State Departments of Education Personnel, Guidance and Personnel Services, 1979. The names and addresses of state sex equity coordinators were obtained from the Directory of State Sex Equity Coordinators, March 1979. The names and addresses of presidents of state vocational associations were obtained from a computer printout entitled State Association Officers provided by the Tennessee State Department of Education (see Appendix C).

A follow-up letter was mailed four weeks after the initial questionnaire was sent. A copy of the follow-up letter to all participants is included in Appendix D. No questionnaire was included in the second mailing unless specifically asked for by the participant. A summary of the questionnaire distributions, follow-ups and returns is given in Table 1.

VI. METHODS OF DATA COLLECTION

The study was designed to identify perceptions of educational personnel which influenced the enrollment of females into non-traditional vocational education programs. Identifying congruence of those perceptions among educational personnel was also measured by the study.

TABLE 1
QUESTIONNAIRE DISTRIBUTIONS, FOLLOW-UP AND RETURNS

Category	Number in 1st Mailing	Received Prior to 1st Follow-up	Received After 1st Follow-up	Total Received	Percentage Return
State Directors of Vocational Education	50	32	10	42	84%
State Sex Equity Coordinators	50	32	8	40	80%
Presidents of State Vocational Associations	50	28	4	32	64%
State Directors of Counseling	50	24	7	31	62%
Totals	200	116	29	145	

Reliability of the Survey Instrument

Data for the study were grouped and analyzed through the use of a computer package entitled the Statistical Package for the Social Sciences (SPSS). The SPSS subprogram "reliability" makes it possible to compute a reliability coefficient which refers "to the degree of accuracy, the estimate of the true score in a population of objects to be measured."³² The program provided a categorical frequency count and percentage for the responses to each variable.

Homogeneity of Variance

One of the assumptions made by selected statistical procedures the researcher used in the study is that of equal variance. "If there are an equal number of scores in each of the various groups, the researcher does not have to test this assumption. When group variances are dissimilar, a test for homogeneity of variance should be made."³³ Since the various groups do not contain the same number of subjects, the researcher was obligated to test the assumption of equal variances. Bartlett Box-F was used as suggested by Huck.³⁴

³²Norman H. Nie, Dale H. Bent, and C. Hadlai Hull, Statistical Package for the Social Sciences Update, Hightstown, N.J.: McGraw-Hill, Inc., 1977, p. 61.

³³Schuyler W. Huck and others. Reading Statistics and Research (New York, N.Y.: Harper and Row, 1974), p. 68.

³⁴Ibid.

VII. TESTS FOR SIGNIFICANT DIFFERENCES

Analysis of Variance (ANOVA)

When homogeneity of variance was achieved according to the Bartlett-Box F test, a one-way ANOVA was used to compare the mean perceptions of the four groups. Kerlinger³⁵ makes the assumption for the analysis of variance within the groups are statistically the same. Hence, if the researcher's calculated F value was larger at the .05 value than the tabled critical value, then there were significant differences between the sample means, and the null hypotheses would be rejected. If the critical value was larger, then the sample means do not differ significantly and the null hypotheses would be accepted.

Scheffe's Multiple Comparison Test

Scheffe's test, the most conservative post hoc test was used to locate significant differences after a significant F ratio was obtained. This test was performed at the .05 level of significance.

³⁵Fred N. Kerlinger, Foundations of Behavioral Research, New York, N.Y.: Holt, Rinehart and Winston, Inc., 1973, pp. 213-241.

CHAPTER IV

PRESENTATION OF THE DATA

I. INTRODUCTION

The purpose of the study was to identify perceptions of educational personnel which influenced the enrollment of females into non-traditional vocational education programs. Presented in this chapter are the perceptions of educational personnel and the differences in the perceptions of the state directors of vocational education, state sex equity coordinators, presidents of state vocational associations, and state directors of counseling concerning influential factors.

The specific purpose of the study required answers to the following questions:

1. How do state directors of vocational education perceive factors influencing the enrollment of females into non-traditional vocational education programs?
2. How do state sex equity coordinators perceive factors influencing the enrollment of females into non-traditional vocational education programs?
3. How do presidents of state vocational associations perceive factors influencing the enrollment of females into non-traditional vocational education programs?

4. How do state directors of counseling perceive factors influencing the enrollment of females into non-traditional vocational education programs?

Data for the study, based on the educational personnel responses are reflected in the following tables. Each of the 50 items was tested using each of the four study groups. The perception scales used judging how influential factors were perceived toward enrollment of females into non-traditional vocational education programs were: (1) not influential, (2) somewhat influential, (3) influential, (4) very influential, and (5) extremely influential.

II. PERCEPTIONS OF EDUCATIONAL PERSONNEL CONCERNING INFLUENTIAL FACTORS

For purposes of reporting, data were divided into three groups ranked by means: high, medium and low. A mean of 4.70 to 3.74 was reported as high, indicating those items from the questionnaire were perceived to have a high degree of influence toward the enrollment of females into non-traditional vocational education programs. A mean of 3.73 to 3.28 was reported as medium, indicating those items from the questionnaire were perceived to have a medium degree of influence while a mean of 3.26 to 2.13 was reported as low, indicating a low degree of influence.

Table II answers the following question:

1. How do state directors of vocational education perceive factors influencing the enrollment of females into non-traditional vocational education programs?

TABLE II
GROUP I--MEAN PERCEPTIONS OF STATE DIRECTORS
OF VOCATIONAL EDUCATION

Rank	Item	Mean
<u>Section I</u>		
18.	contact with women employed	4.49
3.	job site visitation	4.00
8.	vocational counseling	3.81
2.	career orientation programs	3.67
1.	career education K-12	3.55
7.	individual counseling	3.40
13.	female vocational teachers	3.21
4.	industrial speakers	3.14
6.	group counseling with women and men	3.12
12.	male vocational teachers	3.00
5.	group counseling with women	2.95
11.	female counselors	2.86
9.	vocational testing	2.76
10.	male counselors	2.55
15.	female math/science teachers	2.50
14.	male math/science teachers	2.29
17.	female academic teachers	2.34
16.	male academic teachers	2.14

TABLE II (Continued)

Rank	Item	Mean
<u>Section II</u>		
32.	parental attitudes	4.36
33.	parent involvement with program selection	3.90
35.	early orientation to a variety of occupations	3.76
31.	parents' knowledge of occupational information	3.67
25.	mother	3.67
26.	mother's occupation	3.64
19.	father	3.62
34.	active recruitment by school	3.60
30.	female friends	3.50
27.	mother's level of education	3.50
20.	father's occupation	3.43
21.	father's level of education	3.40
22.	father's income	3.24
28.	mother's income	3.19
24.	male friends	3.14
29.	female relatives	3.02
23.	male relatives	2.69
<u>Section III</u>		
36.	interest in the area	4.12
43.	employment possibilities	3.93

TABLE II (Continued)

Rank	Item	Mean
<u>Section III (Continued)</u>		
38.	likelihood to earn good income	3.88
39.	attraction of working conditions	3.81
40.	extensive occupational information about non-traditional careers	3.71
37.	ability in the area	3.71
45.	continuation of p-s training	3.36
44.	alternative career	3.12
41.	encouragement to take math	2.60
42.	encouragement to take science	2.55
<u>Section IV</u>		
49.	teacher awareness of maximizing success in work world	3.88
48.	male classmate's acceptance of females	3.86
47.	teacher expectations of class performance	3.71
46.	teacher expectations of entry level skills	3.70
50.	women's perception of men being better prepared	3.12

Items perceived as having a high degree of influence (a mean of 4.70 to 3.74) on the enrollment of females into non-traditional vocational education programs were ranked as follows:

Section I

18. contact with women employed in non-traditional occupations
3. job site visitation
8. vocational counseling

Section II

32. parental attitudes
33. parent involvement with program selection
35. early orientation to a variety of occupations

Section III

36. interest in the area
43. employment possibilities
38. likelihood to earn good income
39. attraction of working conditions

Section IV

49. teacher awareness of maximizing success in work world
48. male classmate's acceptance of females

Items perceived as having a medium degree of influence (a mean of 3.73 to 3.28) on the enrollment of females into non-traditional vocational education were ranked as follows:

Section I

2. career orientation programs
1. career education K-12
7. individual counseling

Section II

- 31. parents' knowledge of occupational information
- 25. mother
- 26. mother's occupation
- 19. father
- 34. active recruitment by school
- 30. female friends
- 27. mother's level of education
- 20. father's occupation
- 21. father's level of education

Section III

- 40. extensive occupational information about non-traditional careers
- 37. ability in the area
- 45. continuation of post-secondary training

Section IV

- 47. teacher expectations of class performance
- 46. teacher expectations of entry level skills

Items perceived as having a low degree of influence (a mean of 3.26 to 2.13) on the enrollment of females into non-traditional vocational education programs were ranked as follows:

Section I

- 13. female vocational teachers
- 4. industrial speakers
- 6. group counseling with women and men

- 12. male vocational teachers
- 5. group counseling with women
- 11. female counselors
- 9. vocational testing
- 10. male counselors
- 15. female math/science teachers
- 14. male math/science teachers
- 17. female academic teachers
- 16. male academic teachers

Section II

- 22. father's income
- 28. mother's income
- 24. male friends
- 29. female relatives
- 23. male relatives

Section III

- 44. alternative career
- 41. encouragement to take math
- 42. encouragement to take science

Section IV

- 50. Women's perception of men being better prepared

Table III answers the following question:

2. How do state sex equity coordinators perceive factors influencing the enrollment of females into non-traditional vocational education programs?

TABLE III
GROUP II--MEAN PERCEPTIONS OF STATE SEX
EQUITY COORDINATORS

Rank	Item	Mean
<u>Section I</u>		
18.	contact with women employed in non-traditional occupations	4.55
3.	job site visitation	3.98
1.	career education K-12	3.85
2.	career orientation programs	3.78
8.	vocational counseling	3.68
4.	industrial speakers	3.55
7.	individual counseling	3.55
15.	female math/science teachers	3.43
13.	female vocational teachers	3.40
5.	group counseling with women	3.35
12.	male vocational teachers	3.25
6.	group counseling with women and men	3.23
17.	female academic teachers	3.20
14.	male math/science teachers	3.13
16.	male academic teachers	3.00
11.	female counselors	2.86
10.	male counselors	2.58
9.	vocational testing	2.53

TABLE III (Continued)

Rank	Item	Mean
<u>Section II</u>		
32.	parental attitudes	4.70
35.	early orientation to a variety of occupations	4.55
33.	parent involvement	4.23
34.	active recruitment by school	4.23
31.	parents' knowledge of occupational information	4.10
19.	father	4.05
26.	mother's occupation	3.88
25.	mother	3.83
27.	mother's level of education	3.83
24.	male friends	3.78
30.	female friends	3.73
28.	mother's income	3.65
20.	father's occupation	3.58
21.	father's level of education	3.48
22.	father's income	3.30
23.	male relatives	3.05
29.	female relatives	3.00
<u>Section III</u>		
36.	interest in the area	4.33
40.	extensive occupational information about non-traditional careers	4.15

TABLE III (Continued)

Rank	Item	Mean
<u>Section III (Continued)</u>		
43.	employment possibilities	4.10
37.	ability in the area	4.00
41.	encouragement to take math	3.95
42.	encouragement to take science	3.95
38.	likelihood to earn good income	3.68
39.	attraction of working conditions	3.53
44.	alternative careers	3.43
<u>Section IV</u>		
48.	male classmate's acceptance of females	4.63
46.	teacher expectations of entry level skills	4.20
49.	teacher awareness of maximizing success in work world	4.20
47.	teacher expectations of class performance	4.15
50.	women's perception of men being better prepared	3.78

Items perceived as having a high degree of influence (a mean of 4.70 to 3.74) on the enrollment of females into non-traditional vocational education programs were ranked as follows:

Section I

18. contact with women employed in non-traditional occupations
3. job site visitation
1. career education K-12
2. career orientation programs

Section II

32. parental attitudes
35. early orientation to a variety of occupations
33. parent involvement
34. active recruitment by school
31. parents' knowledge of occupational information
19. father
26. mother's occupation
25. mother
27. mother's level of education
24. male friends
30. female friends

Section III

36. interest in the area
40. extensive occupational information about non-traditional careers
43. employment possibilities

- 37. ability in the area
- 41. encouragement to take math
- 42. encouragement to take science

Section IV

- 48. male classmates' acceptance of females
- 46. teacher expectations of entry level skills
- 49. teacher awareness of maximizing success in work world
- 47. teacher expectations of class performance
- 50. women's perception of men being better prepared

Items perceived as having a medium degree of influence (a mean of 3.73 to 3.28) on the enrollment of females into non-traditional vocational education programs were ranked as follows:

Section I

- 8. vocational counseling
- 4. industrial speakers
- 7. individual counseling
- 15. female math/science teachers
- 13. female vocational teachers
- 5. group counseling with women

Section II

- 30. female friends
- 28. mother's income
- 20. father's occupation
- 21. father's level of education
- 22. father's income

Section III

- 38. likelihood to earn good income
- 39. attraction of working conditions
- 44. alternative careers

Section IV

- 45. continuation of post-secondary training

Items perceived as having a low degree of influence (a mean of 3.26 to 2.13) on the enrollment of females into non-traditional vocational education programs were ranked as follows:

Section I

- 12. male vocational teachers
- 6. group counseling with women and men
- 17. female academic teachers
- 14. male math/science teachers
- 16. male academic teachers
- 11. female counselors
- 10. male counselors
- 9. vocational testing

Section II

- 23. male relatives
- 29. female relatives

No items in Section III or Section IV were perceived as having a low degree of influence by state sex equity coordinators.

Table IV answers the following question:

TABLE IV
GROUP III--MEAN PERCEPTIONS OF PRESIDENTS OF
STATE VOCATIONAL ASSOCIATIONS

Rank	Item	Mean
<u>Section I</u>		
18.	contact with women employed in non-traditional occupations	4.31
8.	vocational counseling	3.75
7.	individual counseling	3.69
3.	job site visitation	3.50
1.	career education K-12	3.44
13.	female vocational teachers	3.35
9.	vocational testing	3.34
6.	group counseling with women and men	3.16
5.	group counseling with women	3.13
2.	career orientation programs	3.09
4.	industrial speakers	3.06
12.	male vocational teachers	2.94
11.	female counselors	2.75
10.	male counselors	2.56
15.	female math/science teachers	2.31
17.	female academic teachers	2.31
14.	male math/science teachers	2.19
16.	male academic teachers	2.13

TABLE IV (Continued)

Rank	Item	Mean
<u>Section II</u>		
32.	parental attitudes	4.38
33.	parent involvement with program selection	4.00
35.	early orientation to a variety of occupations	3.94
31.	parents' knowledge of occupational information	3.84
19.	father	3.63
30.	female friends	3.60
25.	mother	3.47
34.	active recruitment by school	3.47
21.	father's level of education	3.44
26.	mother's occupation	3.38
22.	father's income	3.34
27.	mother's level of education	3.28
28.	mother's income	3.22
20	father's occupation	3.19
24.	male friends	3.06
29.	female relatives	2.97
23.	male relatives	2.84
<u>Section III</u>		
36.	interest in the area	4.38
38.	likelihood to earn good income	4.19
39.	attraction of working conditions	4.13

TABLE IV (Continued)

Rank	Item	Mean
<u>Section III (Continued)</u>		
37.	ability in the area	4.00
43.	employment possibilities	4.00
40.	extensive occupational information about non-traditional careers	3.75
45.	continuation of p-s training	3.47
44.	alternative careers	3.28
41.	encouragement to take math	2.72
42.	encouragement to take science	2.66
<u>Section IV</u>		
49.	teachers awareness of maximizing success in work world	3.81
48.	male classmate's acceptance of females	3.69
47.	teacher expectations of class performance	3.56
46.	teacher expectations of entry level skills	3.41
50.	women's perceptions of men being better prepared	3.03

3. How do presidents of state vocational associations perceive factors influencing the enrollment of females into non-traditional vocational education programs?

Items perceived as having a high degree of influence (a mean of 4.70 to 3.74) on the enrollment of females into non-traditional vocational education programs were ranked as follows:

Section I

- 18. contact with women employed in non-traditional occupations
- 8. vocational counseling

Section II

- 32. parental attitudes
- 33. parent involvement with program selection
- 35. early orientation to a variety of occupations
- 31. parents' knowledge of occupational information

Section III

- 36. interest in the area
- 38. likelihood to earn good income
- 39. attraction of working conditions
- 37. ability in the area
- 43. employment possibilities
- 40. extensive occupational information about non-traditional

careers

Section IV

- 49. teacher awareness of maximizing success in work world

Items perceived as having a medium degree of influence (a mean of 3.73 to 3.28) on the enrollment of females into non-traditional vocational education programs were ranked as follows:

Section I

- 7. individual counseling
- 3. job site visitation
- 1. career education K-12
- 13. female vocational teachers
- 9. vocational testing

Section II

- 19. father
- 30. female friends
- 25. mother
- 34. active recruitment by school
- 21. father's level of education
- 26. mother's occupation
- 22. father's income
- 27. mother's level of education

Section III

- 45. continuation of post-secondary training
- 44. alternative career

Section IV

- 48. male classmates' acceptance of females
- 46. teacher expectations of entry level skills
- 47. teacher expectations of females

Items perceived as having a low degree of influence (a mean of 3.26 to 2.13) on the enrollment of females into non-traditional vocational education programs were ranked as follows:

Section I

6. group counseling with women and men
5. group counseling with women
2. career orientation programs
4. industrial speakers
12. male vocational teachers
11. female counselors
10. male counselors
15. female math/science teachers
17. female academic teachers
14. male math/science teachers
16. male academic teachers
27. mother's level of education

Section II

28. mother's income
20. father's occupation
24. male friends
29. female relatives
23. male relatives

Section III

41. encouragement to take math
42. encouragement to take science

Section IV

50. women's perception of men being better prepared

Table V answers the following question:

4. How do state directors of counseling perceive factors influencing the enrollment of females into non-traditional vocational education programs?

Items perceived as having a high degree of influence (a mean of 4.70 to 3.74) on the enrollment of females into non-traditional vocational education programs were ranked as follows:

Section I

18. contact with women employed in non-traditional occupations

Section II

32. parental attitudes

33. parent involvement with program selection

35. early orientation to a variety of occupations

27. mother's level of education

25. mother

26. mother's occupation

31. parents' knowledge of occupational information

Section III

36. interest in the area

38. likelihood to earn good income

43. employment possibilities

37. ability in the area

39. attraction of working conditions

TABLE V
GROUP IV--MEAN PERCEPTIONS OF STATE
DIRECTORS OF COUNSELING

Rank	Item	Mean
<u>Section I</u>		
18.	contact with women employed in non-traditional occupations	4.35
3.	job site visitation	3.68
8.	vocational counseling	3.68
7.	individual counseling	3.48
1.	career education K-12	3.45
6.	group counseling with women and men	3.45
2.	career orientation programs	3.29
5.	group counseling with women	3.13
13.	female vocational teachers	3.07
11.	female counselors	2.97
9.	vocational testing	2.90
4.	industrial speakers	2.77
10.	male counselors	2.77
17.	female academic teachers	2.77
15.	female math/science teachers	2.74
12.	male vocational teachers	2.58
14.	male math/science teachers	2.55
16.	male academic teachers	2.52

TABLE V (Continued)

Rank	Item	Mean
<u>Section II</u>		
32.	parental attitudes	4.26
33.	parent involvement with program selection	3.87
35.	early orientation to a variety of occupations	3.87
27.	mother's level of education	3.84
25.	mother	3.74
26.	mother's occupation	3.74
31.	parents' knowledge of occupational information	3.61
21.	father's level of education	3.61
19.	father	3.58
34.	active recruitment by school	3.48
28.	mother's income	3.45
30.	female friends	3.42
22.	father's income	3.35
20.	father's occupation	3.19
24.	male friends	3.03
29.	female relatives	2.77
23.	male relatives	2.58
<u>Section III</u>		
36.	interest in the area	4.16
38.	likelihood to earn good income	3.97

TABLE V (Continued)

Rank	Item	Mean
<u>Section III (Continued)</u>		
43.	employment possibilities	3.94
37.	ability in the area	3.74
40.	extensive occupational information about non-traditional careers	3.68
45.	continuation of p-s training	3.39
42.	encouragement to take science	3.29
41.	encouragement to take math	3.26
44.	alternative careers	3.20
<u>Section IV</u>		
48.	male classmate's acceptance of females	3.84
49.	teachers awareness of maximizing success in work world	3.84
47.	teacher expectations of class performance	3.48
46.	teacher expectations of entry level skills	3.45
50.	women's perception of men being better prepared	3.35

- 43. employment possibilities
- 37. ability in the area
- 39. attraction of working conditions

Section IV

- 48. male classmates' acceptance of females
- 49. teacher awareness of maximizing success in work world

Items perceived as having a medium degree of influence (a mean of 3.73 to 3.28) on the enrollment of females into non-traditional vocational education programs were ranked as follows:

Section I

- 3. job site visitation
- 8. vocational counseling
- 7. individual counseling
- 1. career education K-12
- 6. group counseling withh women and men
- 2. career orientation programs

Section II

- 21. father's level of education
- 19. father
- 34. active recruitment by school
- 28. mother's income
- 30. female friends
- 22. father's income

Section III

- 40. extensive occupational information about non-traditional careers
- 45. continuation of post-secondary training
- 42. encouragement to take science

Section IV

- 47. teacher expectations of class performance
- 46. teacher expectations of entry level skills
- 50. women's perception of men being better prepared

Items perceived as having a low degree of influence (a mean of 3.26 to 2.13) on the enrollment of females into non-traditional vocational education programs were ranked as follows:

Section I

- 5. group counseling with women
- 13. female vocational teachers
- 11. female counselors
- 9. vocational testing
- 4. industrial speakers
- 10. male counselors
- 17. female academic teachers
- 15. female math/science teachers
- 12. male vocational teachers
- 14. male math/science teachers
- 16. male academic teachers

Section II

- 20. father's occupation
- 24. male friends
- 39. female relatives
- 23. male relatives

Section III

- 41. encouragement to take math
- 44. alternative careers

No items in Section IV were perceived as having a low degree of influence by state directors of counseling.

III. SIGNIFICANT DIFFERENCES IN THE PERCEPTIONS OF EDUCATIONAL PERSONNEL

Data analyses were structured to include testing of the following null hypotheses:

H_1 : There are no significant differences between the mean perceptions of state directors of vocational education and state directors of counseling.

H_2 : There are no significant differences between the mean perceptions of state directors of vocational education and state sex equity coordinators.

H_3 : There are no significant differences between the mean perceptions of state directors of vocational education and presidents of state vocational associations.

H_4 : There are no significant differences between the mean perceptions of state directors of counseling and state sex equity coordinators.

H_5 : There are no significant differences between the mean perceptions of state directors of counseling and presidents of state vocational associations.

H_6 : There are no significant differences between the mean perceptions of state sex equity coordinators and presidents of state vocational associations.

In order to test the null hypotheses the following statistical techniques were utilized.

The one-way Analysis of Variance (ANOVA) was used to compare the four groups in terms of mean scores. The raw scores were used in the statistical analysis and a significance level of .05 selected. The results showed significant differences between the groups. The mean differences between groups reached significance ($F = 4.34$, $df = 3/137$) as shown in Table VI.

According to the Bartlett Box-F test, there is homogeneity of variance among the four groups. This means that the population are alike regarding their variations in response to the questionnaire. Since the variances are homogeneous, the F ratio in the ANOVA can be interpreted to be significant beyond the .05 level of significance, indicating there are significant differences among the means of the four groups.

TABLE VI
ONE-WAY ANOVA SUMMARY TABLE FOR STUDY COMPARING
DIFFERENT ITEM ARRANGEMENTS

Source	df	SS	MS	F
Between Groups	3	7756.4693	2585.4897	4.34*
Within Groups	137	81664.4492	596.0908	
Total	140	89420.8750		

* $p < .05$.

F value = 2.68 with 3/137 degrees of freedom.

In order to locate the significant differences, multiple comparison tests or post hoc comparisons are used to analyze each possible pair of means to determine if the two means are significantly different from one another.³⁶ Scheffe's, the most conservative post hoc test, indicates the differences are between group 1 and group 2, state directors of vocational education and state sex equity coordinators; and between group 2 and 3, state sex equity coordinators and presidents of state vocational associations.

As indicated by Table VII, Group II--state sex equity coordinators, obtained a higher perception of the factors influencing enrollment of females into non-traditional vocational education programs.

The following null hypotheses were tested at the .05 level of significance:

H₁, "There are no significant differences between the mean perceptions of state directors of vocational education and state directors of counseling," failed to be rejected for all of the items. No significant differences were found when the mean influential rankings of state directors of vocational education and state directors of counseling were compared for each item.

H₂, "There are no significant differences between the mean perceptions of state directors of vocational education and state sex equity coordinators," failed to be accepted. The mean score of 185.23

³⁶Huck, loc. cit., p. 68.

TABLE VII

SCHEFFE'S PROCEDURE FOR DENOTING PAIRS OF GROUPS
SIGNIFICANTLY DIFFERENT

Mean	Group								
168.20	GPR 01-40-Directors, Vocational Education ^a	G	G	G	G				
168.65	GRP 03-31-Presidents, Vocational Associations ^a	R	R	R	R				
169.83	GRP 04-30-Directors, Counseling ^a	P	P	P	P				
185.23	GRP 02-40-Sex Equity Coordinators ^a								
		0	0	0	0				
		1	3	4	2				
		*	*	*	*				

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

^aGRP-01-State Directors of Vocational Education
 GRP-02-State Sex Equity Coordinators
 GRP-03-Presidents of State Vocational Associations
 GRP-04-State Directors of Counseling.

(state sex equity coordinators) showed a significant difference of perception when compared to the mean score of 168.20 (state directors of vocational education) as shown in Table VII. Differences occurred in 11 out of 50 items. Included were items that pertained to school programs, parent and peer information, and encouragement to participate in non-traditional subject areas.

H₃, "There are no significant differences between the mean perceptions of state directors of vocational education and presidents of state vocational associations," failed to be rejected for all of the items. No significant differences were found when state directors of vocational education and presidents of state vocational associations mean influential rankings were compared for each item.

H₄, "There are no significant differences between the mean perceptions of state directors of counseling and state sex equity coordinators," failed to be rejected for all of the items. No significant differences were found when state directors of counseling and state sex equity coordinators mean influential rankings were compared for each item.

H₅, "There are no significant differences between the mean perceptions of state directors of counseling and presidents of state vocational associations," failed to be rejected for all of the items. No significant differences were found when state directors of counseling and presidents of state vocational associations mean influential rankings were compared for each item.

H₆, "There are no significant differences between the mean perceptions of state sex equity coordinators and presidents of state vocational associations," failed to be accepted. The mean score of state sex equity coordinators (185.23) showed a significant difference when compared to the mean score of presidents of state vocational associations (168.65) as shown in Table VII at the .05 level of significance. Differences occurred in 14 out of 50 items. These included school programs, parent occupations and knowledge of occupations, encouragement to participate in non-traditional subject areas, and classroom factors.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

I. SUMMARY OF THE PROCEDURES

The major purpose of the study was to identify influential factors affecting enrollment of females into non-traditional vocational education programs as perceived by educational personnel. A secondary purpose was to determine if there was congruence of those perceptions among educational personnel. The specific purpose of the study required answers to the following questions:

1. How do state directors of vocational education perceive factors influencing the enrollment of females into non-traditional vocational education programs?

2. How do state sex equity coordinators perceive factors influencing the enrollment of females into non-traditional vocational education programs?

3. How do presidents of state vocational associations perceive factors influencing the enrollment of females into non-traditional vocational education programs?

4. How do state directors of counseling perceive factors influencing the enrollment of females into non-traditional vocational education programs?

Six null hypotheses were tested at the .05 level of significance:

H₁: There are no significant differences between the mean perceptions of state directors of vocational education and state directors of counseling.

H₂: There are no significant differences between the mean perceptions of state directors of vocational education and state sex equity coordinators.

H₃: There are no significant differences between the mean perceptions of state directors of vocational education and presidents of state vocational associations.

H₄: There are no significant differences between the mean perceptions of state directors of counseling and state sex equity coordinators.

H₅: There are no significant differences between the mean perceptions of state directors of counseling and presidents of state vocational associations.

H₆: There are no significant differences between the mean perceptions of state sex equity coordinators and presidents of state vocational associations.

Data for the study were obtained from state directors of vocational education (N = 42), state sex equity coordinators (N = 40), presidents of state vocational associations (N = 32), and state directors of counseling (N = 31). The study included four persons from each state, nationwide, as its population.

A questionnaire, consisting of 50 items, was developed to gather data for the study. The questionnaire was divided into four

sections. The first section, items 1-18, pertained to school programs and personnel. The second section, items 19-35, pertained to parent and peer information. The third section, items 36-45, pertained to personal reasons for selection and employment and training possibilities. The fourth and last section, items 46-50, pertained to classroom factors.

A total of 200 questionnaires were mailed to 50 persons in each group. Of group 1, state directors of vocational education, 84 percent returned questionnaires; 80 percent of group 2, state sex equity coordinators; 64 percent of group 3, presidents of state vocational associations; and 62 percent of group 4, state directors of counseling.

Using a five-point Likert scale, respondents were asked to indicate the degree of influence of the 50 items affecting enrollment of females into non-traditional vocational education programs.

Computations of frequencies, percentages, and means were completed for the 50 items for each of the four groups. Homogeneity of variance was tested using the Bartlett Box-F test. Differences between reference groups' mean perceptions were tested by using one-way analysis of variance. Scheffe's multiple comparison test was utilized to locate significant differences between the four groups.

II. SUMMARY OF THE FINDINGS

Findings for the study are presented as follows:

1. How do state directors of vocational education perceive factors influencing the enrollment of females into non-traditional vocational education programs?

State directors of vocational education perceived only 12 out of 50 items as having a high degree of influence. Included were items from Section I, 3 out of 18, (items pertaining to school programs and personnel), Section II, 3 out of 17, (items pertaining to parent and peer information), Section III, 4 out of 10, (items pertaining to reasons for selection), and Section IV, 2 out of 5, (items pertaining to classroom factors). Both male and female vocational teachers as well as all other teachers and counselors were perceived as having a low degree of influence.

2. How do state sex equity coordinators perceive factors influencing the enrollment of females into non-traditional vocational education programs?

State sex equity coordinators perceived 26 out of 50 items as having a high degree of influence. Included were items from Section I, 4 out of 18, (items pertaining to school programs and personnel), Section II, 11 out of 17, (items pertaining to parent and peer information), Section III, 6 out of 10, (items pertaining to reasons for selection), and Section IV, 5 out of 5, (items pertaining to classroom factors).

State sex equity coordinators did not perceive any items in Section III or Section IV as having a low degree of influence. However, they did perceive most teachers and counselors as having a low degree of influence.

3. How do presidents of state vocational associations perceive factors influencing the enrollment of females into non-traditional vocational education programs?

Only 13 out of 50 items were perceived by presidents of state vocational associations as having a high degree of influence. The findings revealed that 6 of those items pertained to Section III (items pertaining to personal reasons for selection), 4 of those items pertained to Section II (items pertaining to parent and peer influence), while only 2 pertained to Section I (items pertaining to school programs and personnel) and only 1 item from Section IV (items pertaining to classroom factors). All teachers, with the exception of female vocational teachers, and counselors were perceived to have a low degree of influence.

4. How do state directors of counseling perceive factors influencing the enrollment of females into non-traditional vocational education programs?

Fifteen of the 50 items were perceived by state directors of counseling as having a high degree of influence. Section I (items pertaining to school personnel and programs) included only 1 out of 18 items. Section II (items pertaining to parent and peer influence) included 7 out of 10 items. Section III (items pertaining to personal

reasons for selection) included 5 out of 10 items and Section IV (items pertaining to classroom factors) included 2 out of 5 items. Items perceived by state directors of counseling as having low degree of influence included 11 out of 18 items in Section I (items pertaining to school programs and personnel). Specifically, (5) group counseling with women, (11) female counselors, (9) vocational testing, (4) industrial speakers (advocated by research to be one of the most influential), (10) male counselors, and items 17, 15, 12, 13, 14, 16, all referring to different types of teachers.

5. All groups perceived the major portion of Section I (items pertaining to school programs and personnel) particularly counselors and teachers as having a low degree of influence. All groups perceived item 18 as having a high degree of influence (contact with women employed in non-traditional careers).

6. All groups perceived the same items in Section II as having a high degree of influence (parental attitudes, parent involvement and early orientation to a variety of occupations).

7. H_1 , H_3 , H_4 , H_5 , failed to be rejected for all of the items. No significant differences were found when group 1 and 4, group 1 and 3, group 4 and 2, and group 4 and 3 mean influential rankings were compared for each item.

8. H_2 failed to be accepted. The mean score of 185.23 (state sex equity coordinators--group 2) showed a significant difference of perception when compared to the mean score of 168.20 (state directors of vocational education--group 1). Differences occurred in 11 out of 50 items.

9. H_6 failed to be accepted. The mean score of 185.23 (state sex equity coordinators--group 2) showed a significant difference of perception when compared to the mean score of 168.65 (presidents of state vocational associations--group 3). Differences were found in 14 out of 50 items.

III. CONCLUSIONS

Based on the findings of the study, the following conclusions were made:

1. State directors of vocational education, presidents of state vocational associations, and state directors of counseling perceived a very small number of items as having a high degree of influence on the enrollment of females into non-traditional vocational education programs.

2. State sex equity coordinators perceived more items than the three other groups as having a high degree of influence, but the number was small in relation to the total number of items.

3. Classroom factors were perceived by state sex equity coordinators as having a high degree of influence on enrollment of females into non-traditional vocational programs.

4. All groups agreed that counselors and teachers do not exert a high degree of influence on females toward non-traditional roles.

5. All groups perceived "contact with women employed in non-traditional careers," "parental attitudes," "parent involvement," and

"early orientation to a variety of occupations" as having a high degree of influence on female decision-making.

6. State directors of counseling perceived that counseling has no influence on females in non-traditional career decisions.

IV. RECOMMENDATIONS

As a result of the present study, the following recommendations are pertinent:

1. Schools that have been successful in dealing with problems relating to girls and women in non-traditional roles should be studied to determine contributing factors.

2. Vocational educators and counselors in local school systems should seek assistance and support in productive ways to facilitate change.

3. Because of the differences in perceptions of the groups, the state needs to conduct in-service education concerning unique roles of women in non-traditional vocational education programs.

4. Educational personnel should periodically evaluate their knowledge base concerned with vocational education programs curriculum planning and implementation.

5. A viable public relations program involving parents and the community should be made available in local school systems.

SELECTED BIBLIOGRAPHY

SELECTED BIBLIOGRAPHY

- Almquist, Elizabeth M. "Sex Stereotypes in Occupational Choice: The Case for College Women," Journal for Vocational Behavior. 5 1974, 13-21.
- Berger, Gertrude. "The Socialization of American Females as a Dysfunctional Process: Selected Research," Journal of Research and Development in Education. Vol. 10, No. 4, 1977, 3-11.
- Berger, Michael and others. "You and Me Against the World: Dual Career Couples and Joint Job Seeking," Journal of Research and Development in Education. Vol. 10, No. 4, 1977, 61-76.
- Berman, Yitychak. "Occupational Aspirations of 545 Female High School Seniors," Journal of Vocational Behavior. Vol. 2, 1972, 173-177.
- Bohn, Ralph C. "Will the Last Bastion Fall?," American Vocational Journal. Vol. 47, No. 1, January 1976, 70-72.
- Brief, Arthur P. and Ramon J. Aldag. "Male-Female Differences in Occupational Attitudes within Minority Groups," Journal of Vocational Behavior. Vol. 6, 1975, 305-314.
- Broverman, I. K., D. M. Broverman, F. E. Clarkson, P. S. Rosenkrantz, and S. R. Vogel. "Sex-Role Stereotype and Clinical Judgments of Mental Health," Journal of Consulting and Clinical Psychology. Vol. 34, 1970, 1-7.
- Campbell, Thrane and Wesley E. Berdke. "Acceptance and Adjustment of People in Non-Traditional Occupations," VocEd. April 1980, 10-12.
- Crowther, Betty and Douglas M. More. "Occupational Stereotyping on Initial Impressions," Journal of Vocational Behavior. Vol. 2, 1972, 87-94.
- DiSabatino, Marie. "Psychological Factors Inhibiting Women's Occupational Aspirations and Vocational Choices: Implications for Counseling," The Vocational Guidance Quarterly. Vol. 25, No. 1, September 1976.
- _____. Education Amendments of 1976, U. S. Code. Vol. 20, Section 2657, 1976.

- Ellis, Mary L. Expanding Non-Traditional Opportunities in Vocational Education. Ellis Associates, Inc., June 1977.
- Elton, Charles F. and Harriet A. Rose. "A Vocational Interest Test Minus Sex Bias," Journal of Vocational Behavior. Vol. 7, 1975, 207-214.
- Feldman, Saul D. Escape from the Doll's House. New York, N.Y.: McGraw-Hill Book Company, 1974.
- Froschl, Merle, et al. "Women's Lives, Women's Work: A Feminist Approach to the High School Curriculum," Journal of Research and Development in Education. Vol. 10, No. 4, 1977, 12-19.
- Geo-Karis, Adeline J. "Equal Rights for Men and Women," Illinois Teacher. May/June 1975, 286-287.
- Gottfredson, G. D., J. L. Holland and L. S. Gottfredson, "The Relation of Vocational Aspirations and Assessments to Employment Reality," Journal of Vocational Behavior. Vol. 7, 1975, 135-148.
- Gottfredson, G. D. and J. L. Holland. "Vocational Choice for Men and Women: A Comparison of Predictors from the Self-Directed Search," Journal of Counseling Psychology. Vol. 22, 1975, 28-34.
- Harrison, Lauri R. "A National Study of Sex Stereotyping and Discrimination in Vocational Education." Paper printed at the Annual Meeting of the American Education Research Association, Toronto, Canada, March 1978, 27-31.
- Harrison, Laurie R. "The Equity Study: Results and Recommendations," VocEd. April 1980, 39-42.
- Hearings Before the Sub-Committee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor, House of Representatives. Sex Discrimination and Sex Stereotyping in Vocational Education, 94th Congress, First Session.
- Herr, Edwin L. and Thomas E. Enderlein. "Vocational Maturity: The Effects of School, Grade, Curriculum and Sex," Journal of Vocational Behavior. Vol. 8, 1976, 227-238.

- Heshusius-Gilsdorf, Lous T. and Dale L. Gilsdorf. "Girls Are Feamles, Boys Are Males: A Content Analysis of Career Materials," Personnel and Guidance Journal. Vol. 54, December 1975. 207-211.
- Holland, J. L. and others. "An Empirical Occupational Classification Derived from a Theory of Personality and Intended for Practice and Research," ACT Research Report. No. 29, Iowa City: The American College Testing Program, 1969.
- Holland, John L. and Gary D. Gottfredson. "Predictive Values and Psychological Meaning of Vocational Aspirations," Journal of Vocational Aspirations. Vol. 6, 1975, 349-363.
- Hopkins, Patricia. "Sexism in Education: A Review of the ERIC Data Base." Journal of Teacher Education. Vol. 26, No. 4, Winter 1975, 356-359.
- Huck, Schuyler W. and others. Reading Statistics and Research. New York, N.Y.: Harper and Row, 1974.
- Kane, Roslyn D. and Pamela E. Frazee. "Women in Non-Traditional Vocational Education in Secondary Schools." U. S. Department of Health, Education and Welfare, Bureau of Occupational and Adult Education, May 1978. ED 132 429.
- Kerlinger, Fred N. Foundations of Behavioral Research. Holt, Rinehart and Winston, Inc., New York, N.Y., 1973.
- LaShan, Ede. The Wonderful Crisis of Middle Age. Warner Books, New York, N.Y., 1973.
- Lee, Patrick C. "Reinventing Sex Roles in the Early Childhood Setting," Childhood Education. Vol. 52, February 1976, 187-191.
- Lerner, Jane and others. EVE: Equal Vocational Education. Center for Human Resources, University of Houston, Houston, Texas, 1976.
- Lewis, Morgan V. and Lynne Warfield Kaltreida. Attempts to Overcome Sex Stereotyping in Vocational Education. Institute for Research on Human Resources, The Pennsylvania State University, University Park, Penn. 16802, November 1976.
- Little, Dolores M. and Arthur J. Roach. "Videotape Modeling of Interest in Non-Traditional Occupations for Women," Journal of Vocational Behavior. Vol. 5, 1974, 133-138.

- McCune, Shirley D. and Martha Matthews. "Building Positive Futures: Toward A Nonsexist Education for All Children," Childhood Education. Vol. 52, February 1976, 179-186.
- McLaughlin, Donald H. and David V. Tiedeman. "Eleven-Year Career Stability and Change as Reflected in Project Talent Data Through the Flanagan, Holland, and Roe Occupational Classification Systems," Journal of Vocational Behavior. Vol. 5, 1974, 127-196.
- Nie, Norman H., Dale H. Bent, and C. Hadlai Hull. Statistical Package for the Social Sciences Update. New York, N.Y.: McGraw-Hill Book Company, Inc., 1977.
- O'Leary, Virginia E. and Charlene E. Depner. "Alternative Gender Rous Among Women: Masculine, Feminine, Androgenous," Intellect. January 1976, 313-315.
- Omivg, Clayton P. and Edward G. Thomas. "A Socioeconomic Comparison of Vocational Interests: Implications for Counseling," Journal of Vocational Behavior. Vol. 5, 1974, 147-155.
- Ormerod, M. D. "Subject Preference and Choice in Co-Educational and Single-Sex Secondary Schools," The British Journal of Educational Psychology. Vol. 45, 1975, 257-267.
- Predinger, Dale J. and Gary R. Hannon. "A Theory of Career Encounters Sex: Reply to Holland (1976)," Journal of Vocational Behavior. Vol. 8, 1976, 359-366.
- Saario, Terry and others. "Sex Role Stereotyping in the Public Schools," Harvard Educational Review. Vol. 43, No. 3, 1973, 381-415.
- Sandler, Bernice. "Title IX: Antisexism--Big Legal Stick," American Education. May 1977, 6-8.
- Sedney, Mary Anne and Barbara F. Turner. "A Test of Casual Sequences in Women," Journal of Vocational Behavior. Vol. 6, 1975, 281-291.
- Shepard, Winifred O. and David T. Hess. "Attitudes in Four Age Groups Toward Sex Role Division in Adult Occupations and Activities," Journal of Vocational Behavior. Vol. 6, 1975, 27-39.
- Simpson, Richard L. "Sex Stereotyping of Secondary School Teaching Subjects: Male and Female Status Gains and Losses," Sociology of Education. Vol. 47, Summer 1974, 388-398.

- Smeaton, Jane. "Barriers to Enrollment in Post-Secondary VTAE Programs in Wisconsin," Southwest Wisconsin Vocational-Technical Institute, 1976. ED 135 445.
- Smith, Amanda J. "Stamping Out Sex Stereotyping in North Carolina," American Vocational Journal. Vol. 51, No. 4, April 1976.
- Steele, Marilyn. Women in Vocational Education: Project Baseline Supplementary Report. Technical Education Research Centers, Inc., Washington, D.C., 1974, 132.
- Tibbetts, Sylvia-Lee. "Sex-Role Stereotyping in the Lower Grades: Part of the Solution," Journal of Vocational Behavior. Vol. 6, 1975, 225-261.
- Tipton, Robert M. "Attitudes Towards Women's Roles in Society and Vocational Interests," Journal of Vocational Behavior. Vol. 8, 1976, 155-165.
- _____. U. S. Department of HEW, Women's Educational Equity Act. First Annual Report, September 30, 1976.
- Van Dalen, Leobold B. Understanding Educational Research. McGraw-Hill Book Company, New York, N.Y., 1973.
- Vestin, Margaret. "A Freer Choice: A Program for Equality Between the Sexes in Education and School," Journal of Research and Development in Education. Vol. 10, No. 4, 1977, 53-60.
- Vetter, Louise and others. Vocational Education Sex Equity Strategies. Research and Development, Series No. 144, Ohio State University, Columbus. National Center for Research in Vocational Education, 1978.
- Vetter, Louise and others. Factors Influencing Non-Traditional Vocational Education Enrollments: A Literature Review. The National Center for Research in Vocational Education. The Ohio State University, Columbus, Ohio (Research and Development, Series No. 150, 1979).
- Watley, Donivan J. and Rosalyn Kaplan. "Career or Marriage?: Aspirations and Achievements of Able Young Women," Journal of Vocational Behavior. Vol. 1, 1971, 29-43.
- Wertheimer, Barbara and Anne Nelson. "Into the Mainstream: Equal Educational Opportunity for Working Women," Journal of Research and Development in Education. Vol. 10, No. 4, 1977, 61-76.

- Williams, Kathleen L. and others. "Measures of Educational Equity for Women: A Research Monograph," American Institute for Research in the Behavioral Science, Washington, D.C., Women's Program Staff, September 1977.
- Women's Education Advisory Council. "Sex Bias and the Vocational Education Amendments," School Shop. Vol. 8, No. 5, January 1979, 21-23.
- Zuersher, Dorothy J. "Wanted: A More Realistic Educational Preparation for Women," Educational Leadership. November 1975, 118-121.

APPENDICES

APPENDIX A

CAMPUS REVIEW COMMITTEE

CAMPUS REVIEW COMMITTEE*

Business and Office Education.....Dr. Betty Brown
Educational Psychology.....Dr. S. C. Dietz
Educational Psychology.....Dr. Sharon Lord
Public Affairs Office
City of Knoxville.....Dr. Pat Ball
Southeast Sex Desegregation
Assistance Center.....Dr. Norma Mertz,
Director

*All committee members are or have been on the staff of
The University of Tennessee.

APPENDIX B

TRANSMITTAL LETTER, INFORMATION SHEET, CONSENT FORM
AND QUESTIONNAIRE

TRANSMITTAL LETTER TO STATE DIRECTORS OF VOCATIONAL EDUCATION,
STATE DIRECTORS OF COUNSELING, STATE SEX EQUITY COORDINATORS,
PRESIDENTS OF STATE VOCATIONAL ASSOCIATIONS

2811 French Broad Lane
Knoxville, TN 37914
April 10, 1980

The enclosed questionnaire is part of a study conducted in my doctoral program at The University of Tennessee, Knoxville to determine factors influencing the enrollment of females into non-traditional vocational education programs as perceived by educational personnel throughout the nation.

Your input into this study is vital. As an educator, your opinions concerning those influential factors regarding female enrollment are important. You can make known your opinions by completing the enclosed questionnaire. It is hopeful that this study will benefit educators in program planning.

Your completing the questionnaire and returning it as quickly as possible is appreciated. A self-addressed, stamped envelope is enclosed for your convenience.

All responses to the survey will be confidential. Results will be reported by groups and no individual results or no individual state results will be identified.

Thank you for your prompt attention and cooperation.

Sincerely,

S. Carolyn Burkhart
Researcher and Graduate Student
The University of Tennessee

SCB:mlw

Enclosures

EDUCATIONAL PERSONNEL INFORMATION SHEET

Name _____ Type of Position _____

Address _____
City State Zip Phone

1. Service Area Background (check one).

Agricultural Education _____
 Business and Office Education _____
 Distributive Education _____
 Home Economics Education _____
 Trade and Industrial Education _____
 Guidance and Counseling _____

4. Your sex (check one).

female _____
 male _____

2. Postsecondary teaching experience
(circle the appropriate number of
years).1 2 3 4 5 6 7 8 9 10 or more

5. Your age (check one).

20-29 _____
 30-39 _____
 40-49 _____
 50-59 _____
 60 or older _____

3. Secondary teaching experience in
service area (circle appropriate
number of years including current
year).1 2 3 4 5 6 7 8 9 10 or more

PLEASE RETURN ALL ATTACHED SHEETS. THANK YOU.

CONSENT FORM

You are invited to participate in a study to identify influential factors affecting enrollment into non-traditional vocational education programs.

The purposes of my study are to: (1) identify the perceptions of educational personnel influencing the enrollment of females into non-traditional vocational education programs, and (2) to determine if there is congruence of those perceptions among education personnel.

People directly involved in the research data collection will be from state level educational personnel.

No identification of participants will occur. At your request, a copy of the final results of the study will be mailed to you.

Upon deciding to participate, you may withdraw your consent and discontinue participation at any time. However, I would most certainly appreciate your participation in order to make this study meaningful and successful.

The signing of the "Consent Form" certifies that each person is participating of his/her own free will in the study and is free to withdraw consent and to discontinue participation without prejudice. The researcher assures confidentiality of all information.

In the event of physical injury resulting from the research procedure, financial compensation is not available and medical treatment is not provided free of charge.

Participant _____

S. Carolyn Burkhart, Researcher
and Graduate Student
2811 French Broad Lane
Knoxville, TN 37914

mlw

QUESTIONNAIRE

THIS QUESTIONNAIRE WILL TAKE ONLY 12-15 MINUTES OF YOUR TIME.
THANK YOU FOR PARTICIPATING.

This study concerns itself with factors that are influential toward females seeking to enroll in non-traditional secondary vocational education programs. Non-traditional programs are those programs that have enrolled from 0.0 percent to 25.0 percent female students.

DIRECTIONS; The following groups of questions may be answered on a scale from 1-5: 1 = not influential, 2 = somewhat influential, 3 = influential, 4 = very influential, and 5 = extremely influential. Please circle one answer per question. Answer all questions.

EXAMPLE: How influential will this questionnaire be in assisting in this study?

1 2 3 4 5

Section I.

To what extent do each of the following factors influence secondary women in choosing non-traditional careers?

extremely influential
very influential
influential
somewhat influential
not influential

- | | | | | | |
|---|---|---|---|---|---|
| 1. career education from K-12 | 1 | 2 | 3 | 4 | 5 |
| 2. career orientation programs | 1 | 2 | 3 | 4 | 5 |
| 3. job site visitation of non-traditional careers | 1 | 2 | 3 | 4 | 5 |
| 4. industrial speakers | 1 | 2 | 3 | 4 | 5 |
| 5. group counseling with women only | 1 | 2 | 3 | 4 | 5 |
| 6. group counseling with women and men | 1 | 2 | 3 | 4 | 5 |
| 7. individual counseling | 1 | 2 | 3 | 4 | 5 |
| 8. vocational counseling | 1 | 2 | 3 | 4 | 5 |
| 9. vocational testing | 1 | 2 | 3 | 4 | 5 |
| 10. male counselors | 1 | 2 | 3 | 4 | 5 |
| 11. female counselors | 1 | 2 | 3 | 4 | 5 |
| 12. male vocational teachers | 1 | 2 | 3 | 4 | 5 |
| 13. female vocational teachers | 1 | 2 | 3 | 4 | 5 |
| 14. male math/science teachers | 1 | 2 | 3 | 4 | 5 |
| 15. female math/science teachers | 1 | 2 | 3 | 4 | 5 |
| 16. male academic teachers | 1 | 2 | 3 | 4 | 5 |

Section I (continued)

	extremely influential	very influential	influential	somewhat influential	not influential
17. female academic teachers	1	2	3	4	5
18. having contact with women presently employed in a non-traditional occupation	1	2	3	4	5

Section II. How influential are the following factors
on women in their selection of a non-
traditional secondary vocational education
program?

19. father	1	2	3	4	5
20. father's occupation	1	2	3	4	5
21. father's level of education	1	2	3	4	5
22. father's income	1	2	3	4	5
23. male relatives	1	2	3	4	5
24. male friends	1	2	3	4	5
25. mother	1	2	3	4	5
26. mother's occupation	1	2	3	4	5
27. mother's level of education	1	2	3	4	5
28. mother's income	1	2	3	4	5
29. female relatives	1	2	3	4	5
30. female friends	1	2	3	4	5
31. parents' knowledge of occupational information	1	2	3	4	5
32. parental attitudes	1	2	3	4	5
33. parent involvement with program selection	1	2	3	4	5
34. active recruitment by school	1	2	3	4	5
35. early orientation to a variety of occupations	1	2	3	4	5

Section III. How influential are the following factors on women in the selection of training?

	not influential	somewhat influential	influential	very influential	extremely influential
36. interest in the area	1	2	3	4	5
37. ability in the area	1	2	3	4	5
38. likelihood to earn good income	1	2	3	4	5
39. attraction of working conditions	1	2	3	4	5
40. extensive occupational information about non-traditional careers	1	2	3	4	5
41. encouragement to take math	1	2	3	4	5
42. encouragement to take science	1	2	3	4	5
43. employment possibilities for women in non-traditional careers	1	2	3	4	5
44. the likelihood of an alternative career	1	2	3	4	5
45. the continuation of postsecondary training in vocational education	1	2	3	4	5

Section IV. How influential are the following classroom factors on women in assuring that they remain in non-traditional secondary vocational education programs?

46. teacher expectations of entry level skills upon enrollment	1	2	3	4	5
47. teacher expectations of class performance	1	2	3	4	5
48. male classmates' acceptance of females	1	2	3	4	5
49. teacher awareness of maximizing success in the world of work	1	2	3	4	5
50. women's perception of men being better prepared for class instruction	1	2	3	4	5

APPENDIX C

DIRECTORIES OF EDUCATIONAL PERSONNEL

DIRECTORY OF STATE DIRECTORS OF VOCATIONAL EDUCATION

NOVEMBER, 1979

Alabama	Dr. William C. Berryman, Action State Director of Vocational Education State Department of Education 887 State Office Building Montgomery, AL 36130 205-832-3400
Alaska	Mr. Glenn Erickson, Director Vocational-Technical Education Pouch F, Alaska Office Building Juneau, AK 99801 907-586-6330
Arizona	Mr. Gary Bellrichard Associate Superintendent Arizona Department of Education 1535 W. Jefferson Phoenix, AZ 85007
Arkansas	Mr. Luther Hardin Associate Director Vocational-Technical and Adult Education State Department of Education Little Rock, AR 72201 501-371-2165
California	Samuel L. Barrett Assistant Superintendent for Secondary Education and State Director State Education Building 721 Capitol Mall Sacramento, CA 95814 916-445-3314
Colorado	Mr. James W. Wilson, Director Occupational Education Board of Community Colleges and Occupational Education Denver, CO 80203 303-839-3071

Connecticut	Dr. Clarence M. Green Associate Commissioner Division of Vocational Education State Department of Education P.O. Box 2219 Hartford, CT 06115 203-566-7546
Delaware	Mr. Donald Dunkle State Director Department of Public Instruction John G. Townsend Building P.O. Box 1402 Dover, DE 19901 302-678-4638
District of Columbia	Dr. Otho E. Jones Assistant Superintendent for Career Development Programs Public Schools of D. C. 415 12th Street, NE, Room 904 Washington, DC 20004 202-724-4178
Florida	Joe D. Mills, Director Vocational-Technical & Adult Education 204 Knott Building Tallahassee, FL 32301 904-488-8961
Georgia	Dr. Joseph G. Freund Assistant State Superintendent Adult and Vocational Education 237 State Office Building Atlanta, GA 30334 404-656-6711
Guam	Dr. John C. Salas State Director of Vocational Education Guam Community College P.O. Box 23069 GMF Guam, M. I. 96921 734-2931-2405

Hawaii	Dr. Samson S. Shigetomi State Director Vocational Education 2444 Dole Street Room 101, Bachman Hall Honolulu, HI 96822 808-948-7461
Idaho	Dr. Larry Selland, Director Vocational Education 650 West State Street Boise, ID 83720 208-384-3216
Illinois	Dr. James Galloway Assistant Superintendent for Vocational-Technical Education 100 North First Street Springfield, IL 62777
Indiana	Don K. Gentry, Director Vocational Education 17 W. Market Street Illinois Building, Suite 401 Indianapolis, IN 46204 317-633-7673
Iowa	Mr. James C. Athen Career Education Division Department of Public Instruction Grimes State Office Building Des Moines, IA 50319
Kansas	Mr. Dean Prochaska, Assistant Commissioner, Vocational Education State Department of Education 120 E. 10th Street Topeka, KS 66612 913-296-3951
Kentucky	Mr. Billy Ray Howard, Assistant Superintendent of Public Instruction for Vocational Education State Department of Education 2011 Capitol Plaza Tower Frankfort, KY 40601 502-564-4286

Louisiana	Mr. Norman J. Stafford, Jr., Director Bureau of Vocational Education P.O. Box 44064 Baton Rouge, LA 70804 504-389-3981
Maine	Mr. Elwood A. Padham, Associate Commissioner, Cultural Services State Department of Education Augusta, ME 04330 207-289-2621
Maryland	Dr. Addison Hobbs Assistant State Superintendent in Vocational-Technical Education P.O. Box 8717, BWI Airport Baltimore, MD 21240 301-796-8300
Massachusetts	Dr. David F. Cronin Associate Commissioner Division of Occupational Education 182 Tremont Street Boston, MA 02111 617-727-5740
Michigan	Mr. Arnold C. Loomis Interim State Director Vocational-Technical Education Services P.O. Box 3009 Lansing, MI 48909 517-373-3373
Minnesota	R.P. Van Tries, Assistant Commissioner of Vocational- Technical Education Capitol Square Building 550 Cedar Street St. Paul, MN 55101 612-296-3994
Mississippi	Mr. Elwyn Wheat Vocational-Technical Education Sillers Building, Box 771 Jackson, MS 39205 601-354-6980

Missouri	Beauford W. Robinson Assistant Commissioner State Department of Education Box 480, Jefferson Building Jefferson City, MO 65101 314-751-2660
Montana	Dr. Larry C. Key, Director Vocational and Occupational Skills 106 State Capitol Helena, MT 59601 406-449-3126
Nebraska	Mr. Glen H. Strain Assistant Commissioner Vocational Education 301 Centennial Mall South P.O. Box 94987 Lincoln, NB 68508 402-471-2432
Nevada	R. Courtney Riley State Director, Vocational Technical & Adult Education 400 West King Street Carson City, NE 89710 702-882-5700 Ext. 255
New Hampshire	Dr. Duane I. Pierce Chief, Vocational-Technical Education 105 Loudon Road Concord, NH 03301 603-271-2721
New Jersey	William Wenzel Assistant Commissioner of Education 225 West State Street Trenton, NJ 08625 609-292-6340
New Mexico	Miss Wilma Ludwig, Assistant State Superintendent for Vocational Education Department of Education Santa Fe, NM 87501 505-827-3150

New York	Mr. Gerald L. Freeborne Assistant Commissioner Occupational and Continuing Education New York Department of Education 99 Washington Avenue Albany, NY 12230 518-474-3981
North Carolina	Dr. Clifton Belcher, Director Division of Vocational Education Department of Public Instruction 544 Education Building Raleigh, NC 27611 919-733-7362
North Dakota	Mr. Carrol E. Burchinal, Director and Executive Officer State Office Building 900 E. Boulevard Bismark, ND 58505 701-224-2259
Ohio	Dr. Byrl R. Shoemaker, Director Vocational Education 65 S. Front Street Columbus, OH 43215 614-466-3430
Oklahoma	Dr. Francis T. Tuttle State Director, Vocational- Technical Education 1515 W. 6th Avenue Stillwater, OK 74074 405-377-2000
Oregon	Monty E. Multanen State Director, Career and Vocational Education State Department of Education 942 Lancaster Drive, N.E. Salem, OR 97310 503-378-3584
Pennsylvania	Dr. John W. Struck, Director Vocational Education Box 911 Harrisburg, PA 17126 717-787-5530

Puerto Rico	Mr. Edgar Sanchez Assistant Secretary for Vocational-Technical Education P.O. Box 759 Hato Rey, PR 00919 809-753-9128
Rhode Island	Dr. Frank Santoro Deputy Assistant Commissioner for Vocational Education Roger Williams Building 22 Hayes Street, Room 222B Providence, RI 02908 401-277-2691
South Carolina	Moody Oswald, Director Office of Vocational Education 908 Rutledge Building Columbia, SC 29201 803-758-3101
South Dakota	Mr. David Bonde, State Director State Office Building 3 Pierre, SD 57501 605-224-3423
Tennessee	Mr. John T. Leeman, Assistant Commissioner for Vocational Education 200 Cordell Hull Building Nashville, TN 37219 615-741-1716
Texas	Mr. Ben Teague, Associate Commissioner for Occupational Education & Technology Texas Education Agency 201 East 11th Austin, TX 78701 512-475-2585
Utah	Mr. David S. Gailey, State Director Vocational Education 250 East 500 South Salt Lake City, UT 84111 801-533-5371

Vermont	Arthur W. Ericson, Director Vocational-Technical Education Vermont Department of Education State Office Building Montpelier, VT 05602 802-828-3101
Virginia	Dr. Melvin H. Garner, Director Vocational Education State Department of Education P.O. Box 6 Q Richmond, VA 23216 804-786-2657
Virgin Islands	Mr. Aubrey Roebuck, Director Vocational Education P.O. Box 630 Charlotte Amalie St. Thomas, VI 00801 809-744-5240
Washington	Homer Halverson, Executive Officer & State Director Commission for Vocational Education Building #17, Airdustrial Park Olympia, WA 98504 206-753-5660
West Virginia	Clarence E. Burdette, Assistant State Superintendent of Schools Vocational, Technical & Adult Education Building Six, Room B221 1900 Washington Street, East Charleston, WV 25305 304-348-2346
Wisconsin	Eugene Lehrmann, Director and Executive Officer Vocational, Technical & Adult Education 7th Floor, 4802 Sheboygan Avenue Madison, WI 53702 608-266-1770

Wyoming

Dr. Michael Elliott, Director
Occupational Education
Department of Education
Hathaway Building
Cheyenne, WY 82002
707-77-7411

American Samoa

Mr. Craig Clauser, Director
Vocational Education
P.O. Box 2609
Pago Pago, AS 96799
633-5237

Trust Territory
of the Pacific

Herman Cabrera
Coordinator Vocational Education
Department of Education
P.O. Box 9
Saipan, Northern Mariana Islands
96950

Mr. Loren Peterson
Director of Vocational Education
Department of Education
Headquarters
Saipan, Mariana Islands 96950

Executive Director
of NASDVE

Mr. James L. Reid
c/o American Vocational Association
2020 North 14th Street
Arlington, VA 22201
703-522-6121

Home:

6610 Rannoch Drive
Catonsville, MD 21228
301-747-8342

SEX EQUITY COORDINATORS

Ms. Ann Turnham
Supervisor, Sex Role Stereotyping
Division of Vocational Education
State Department of Education
Montgomery, Alabama 36130 (205) 832-5776

Mr. Roy Henderson
Coordinator, Sex Fair Programs
Pouch F - Alaska Office Building
Juneau, Alaska 99801 (907) 465-2980

Ms. Debbie Dillon
Specialist, Sex Stereotyping
State Department of Education
Vocational Education Division
1535 West Jefferson Street
Phoenix, Arizona 85007 (602) 271-5357

Ms. Linda Beene
Program Manager
Vocational Equity Programs, VTE
State Department of Education
1515 West 7th Street, Suite 220
Little Rock, Arkansas 72201 (501) 371-2974

Ms. Connie Gipson
Consultant
State Department of Education
Vocational Education
721 Capitol Mall, 4th Floor
Sacramento, California 95814 (916) 322-2330

Ms. Pat Goggans
Supervisor, Sex Equity
Division of Occupational Education
State Board for Community Colleges
207 State Services Building
Denver, Colorado 80203 (303) 839-3011

Ms. Carole Aiken
Consultant/Sex Equity
Division of Vocational Education
State Department of Education
Box 2219
Hartford, Connecticut 06115 (203) 566-3430

Ms. Carol O'Neill Mayhew
Coordinator, Sex-Equity Program
State Department of Education
Dover, Delaware 19901 (302) 678-4885

Ms. Eunice Wright-Jones
Sex-Equity Coordinator
Division of Vocational Education
Presidential Building
415 Twelfth Street, N.W.
Washington, D.C. 20004 (202) 724-4182

Ms. Charlotte Carney
Vocational Education Equity Coordinator
Division of Vocational-Technical Education
State Department of Education
Knott Building
Tallahassee, Florida 32304 ((904) 488-7695

Ms. Loydia Webber
Vocational Education Equity Coordinator
Office of Special Activities
231 State Office Building
State Department of Education
Atlanta, Georgia 30334 (404) 656-2537

Ms. Barbara White
Coordinator of Special Services
University of Hawaii
Office of the State Director
of Vocational Education
2444 Dole Street, Bachman Hall
Honolulu, Hawaii 96822 (808) 384-3271

Ms. Lianne McAllister
Vocational Education Equity Coordinator
State Department of Education
Len B. Jordan Building - 650 W. State St.
Boise, Idaho 38720 (208) 384-3271

Ms. Mary Ann Knott
Sex Equity Administrator
Adult, Vocational & Technical Education
Illinois Office of Education
Alvina Building - 4th Floor
100 North First Street
Springfield, Illinois 62777 (217) 782-7823

Ms. Cecilia Hawkins
State Coordinator for Reduction
of Sex Bias
State Board of Vocational
and Technical Education
401 Illinois Building
17 West Market Street
Indianapolis, Indiana 46204 (317) 633-7673

Dr. Lenola Allen
Consultant
State Department of Education
Grimes State Office Building
Des Moines, Iowa 50319 (515) 281-8584

Ms. Corena Mook
Sex Equity Specialist
State Department of Education
120 East 10th Street
Topeka, Kansas 66612 (913) 296-2091

Ms. Hazel Davis
Vocational Opportunity Coordinator
State Department of Education
Capitol Plaza Towers, Room 1017
Frankfort, Kentucky 40601 (502) 564-2896

Ms. Joy Joseph
Coordinator, Sex-Equity Programs
Division of Vocational Programs
State Department of Education
P.O. Box 44064
Baton Rouge, Louisiana 70804 (504) 342-3522

Mr. Edward Maroon
Affirmative Action Officer/Voc. Education
Department of Education and
Cultural Services
State Department of Education
Augusta, Maine 04330 (207) 289-2796

Ms. Marie Tarbell, Coordinator
Vocational Education Division
State Department of Education
Box 8717 - Baltimore Washington
International Airport
Baltimore, Maryland 21240 (301) 796-8300

Ms. Lynn Hagar
Equal Educational Opportunities for
Vocational Education
Division of Occupational Education
State Department of Education
182 Tremont Street (617) 727-8140
Boston, Massachusetts 02116

Ms. Sara Lincoln
Vocational Education Equity Coordinator
Vocational-Technical Education Services
P.O. Box 30009 (517) 373-0600
Lansing, Michigan 48909

Ms. Donna Boben
State Coordinator for
Expanded Career Choices
State Department of Education
Capitol Square Building (612) 296-1866
St. Paul, Minnesota 55101

Ms. Judy McLarty
Program Officer
State Department of Education
P.O. Box 771 (601) 354-6805
Jackson, Mississippi 39205

Ms. Georganna Hargadine
Vocational Education Equity Coordinator
State Department of Education
P.O. Box 480 (314) 751-3872
Jefferson City, Missouri 65101

Ms. Sally Moore
Consultant
Human Potential Development
Office of Public Instruction
State Capitol (406) 449-3126
Helena, Montana 59601

Ms. Marge Hatheway
Director
Equal Educational Opportunity
in Vocational Education
State Department of Education
301 Centennial Mall South (402) 471-2441
Lincoln, Nebraska 68509

Ms. Roberta Dowell
 Director
 Elimination of Sex Bias and
 Sex Stereotyping
 Vocational Education
 State Department of Education
 400 West King Street
 Carson City, Nevada 89701 (702) 885-5700

Dr. Nishma Duffy
 Consultant in Equal Access Education
 Division of Vocational-Technical Education
 State Department of Education
 105 Loudon Road
 Concord, New Hampshire 03301 (603) 271-2387

Ms. Jacqueline Walker
 Director, Office for Women in
 Vocational Education
 225 West State Street
 Trenton, New Jersey 08625 (609) 292-2212

Mr. David Hunnicutt
 Coordinator, Equal Vocational
 Opportunity Program
 Vocational Education Division
 State Education Building
 Santa Fe, New Mexico 87503 (505) 827-3151

Ms. Norma Milanovich
 Director, Educational Equity Program,
 Department of Secondary & Adult Teacher
 Education
 University of New Mexico
 Albuquerque, New Mexico 87131 (505) 277-2411

Ms. Carol Jabonaski
 Equity Coordinator
 State Department of Education
 Twin Towers Room 1624
 Albany, New York 12224 (518) 474-0097

Ms. Nancy Thorndal, Coordinator
 Educational Equity in Vocational Education
 North Dakota State Board for
 Vocational Education
 900 East Boulevard Avenue
 Bismarck, North Dakota 58501 (701) 224-2678

Ms. Nancy Smith Evans
Supervisor of Program Equity
Division of Vocational Education
State Office Building-Room 907
65 South Front Street
Columbus, Ohio 43215

(614) 466-3430

Dr. Fern Green
Director, Educational Equity Services
State Department of Vocational
Technical Education
1515 West Sixth Avenue
Stillwater, Oklahoma 74074

(405) 377-2000

Ms. Joan Siebert
Specialist
Vocational Equal Education Opportunity
State Department of Education
942 Lancaster Drive, N.E., Room 14
Salem, Oregon 97310

(503) 378-3074

Ms. Jacqueline Cullen
State Sex Equity Coordinator
State Department of Education
Box 911
Harrisburg, Pennsylvania 17126

(717) 787-4865

Ms. Linda Greenwood
Sex Equity Specialist
State Department of Education
Bureau of Vocational-Technical Education
22 Hayes Street
Providence, Rhode Island 02908

(401) 277-2691

Ms. Annie Winstead
Consultant in Sex Equality
Division of Vocational Education
State Department of Education
Rutledge Building
Columbia, South Carolina 29201

(803) 758-8546

Ms. Ella Stotz, Supervisor
Equality in Vocational Education
State Department of Education
State Office Building No. 3
Pierre, South Dakota 57501

(605) 773-4718

Ms. Patricia Stephan
Specialist
Equal Vocational Opportunity
State Department of Education
213 Cordell Hull Building
Nashville, Tennessee 37219

(615) 741-3059

Dr. Cecil Yvonne Wright
Coordinator for Equal Access
to Vocational Education
Occupational Education and Technology
Texas Education Agency
201 East Eleventh Street
Austin, Texas 87701

(512) 475-6205

Ms. Barbara Hales
Equal Opportunity Specialist
Division of Vocational Education
State Board of Education
250 East Fifth Street
Salt Lake City, Utah 84111

(801) 533-5888

Ms. Noreen O'Connor
Sex Equity Coordinator
Vocational-Technical Education
State Department of Education
Montpelier, Vermont 05602

(802) 828-3101

Ms. Elizabeth Hawa
Sex Equity Coordinator
State Department of Education
Richmond, Virginia 23216

(804) 786-2648

Ms. Beverly Postelwaite
Special Assistant
Commission for Vocational Education
State of Washington
Olympia, Washington 98504

(206) 753-5651

Ms. Marlene Grady
Vocational Education Sex Equity
Coordinator
State Department of Education
1900 Washington Street, East
Charleston, West Virginia 25305

(304) 348-3925

Ms. Anna Biermeier
Opportunity Development Specialist
Vocational Technical
Adult Education Board
4802 Sheboygan Avenue
Madison, Wisconsin 53702 (608) 266-1724

Ms. Barbara Bitters
Sex Equity Coordinator
Room 402
Department of Public Instruction
126 Langdon Street
Madison, Wisconsin 53702 (608) 266-8837

Mr. James Lamprecht
Vocational Education Sex
Equity Coordinator
State Department of Education
Cheyenne, Wyoming 82002 (307) 777-7411

PRESIDENTS OF STATE VOCATIONAL ASSOCIATIONS

Alabama

Mrs. Dorthy Woodward
Gadsden High School
607 S. 12th Street
Gadsden, AL 35901
(205) 547-5446

Alaska

Robert Booher
Alaska Skill Center
P.O. Box 615
Seward, AK 99604
(907) 224-5246

Arkansas

Joe Chambers
General Coop Education
Monticello Public Schools
Monticello, AR 71655
(501) 367-3479

Arizona

Ernest T. Hirata
College of Engineering
Arizona State University
Tempe, AZ 85281

California

Mary P. Schopatz
26-3 Barranca
Santa Barbara, CA 93109
(805) 962-9719

Colorado

Merle Rhoades
Morgan Community College
300 Main Street
Fort Morgan, CO 80701
(303) 867-6894

Connecticut

Paul Brunelli
51 Faye Lane
Southington, CT 06489
(203) 489-1261

District of Columbia

Bennion C. Kent
USOE BOAE
Room 5614
7th and D Street, S.W.
Washington, DC 20202
(202) 245-3465

Delaware

Leann M. Hor Nung
Wilmington High School
Lancaster and Dupont
Wilmington, DE 19807
(302) 429-7201

Florida

Martin Nelson
1832 Bayou Brande Blvd. N.E.
St. Petersburg, FL 33703
(813) 531-3531

Georgia

Fred A. Butterfield
Moultrie School Box
520 Lenox Pt. Road
Moultrie, GA 31768
(912) 985-2297

Hawaii

Sharon Wago
Hyatt Rege Waikiki
2424 Kalakaua Avenue
Honolulu, HI 96815
(808) 922-9292

Iowa

Ross W. Thomas
Hawkeye Institute of Technology
P.O. Box 8015
Waterloo, IA 50704
(319) 296-2320

Illinois

Lloyd Cundiff
Reavis High School
77th and Austin Avenue
Burbank, IL 60459
(312) 599-7200

Indiana

Ed Marlin
Evansville Van School
Corp L, SE 9th Street
Evansville, IN 47708
(812) 426-5038

Kansas

Joe Farrell
Hill City High School
Hill City, KS 67642
(913) 674-2117

Kentucky

Charles Byers
Office 13
University of Kentucky
Lexington, KY 40506
(606) 258-8796

Louisiana

Jan Otwell
Captain Shreve High School
6115 E. Kings Hwy.
Shreveport, LA 71105
(318) 865-7137

Massachusetts

John Clark
220 Sandwich Road
Bourne, MA 02532
(617) 759-7711

Maryland

Ted Rybka
1925 Gough Street
Baltimore, MD 21231
(301) 327-2254

Maine

Edward Lawler
Portland Vocational Center
Portland, ME 04103
(207) 797-8440

Michigan

Donna G. Elwell
Waterford School District
1151 Scott Lake Road
Pontiac, MI 48054
(313) 674-2433

Minnesota

Ed Hill
Dakota Cy A Vil
P.O. Drawer K
Rosemount, MN 55068
(612) 423-8207

Missouri

Fred J. Linhardt
215 Eastwood
Jefferson City, MO 65101
(314) 636-7171

Mississippi

Don Locke
Box 865
Oxford, MS 38655
(601) 234-9469

Montana

Daniel Hertz
School of Business
Montana State University
Bozeman, MT 59717
(406) 994-4421

North Carolina

Ward Robinson
402 Oak Ridge Road
Cary, NC 27511
(919) 733-3063

North Dakota

David Melgaard
Valley City State College
Office Education
Valley City, ND 58072
(701) 845-7721

Nebraska

Lavern Franzen
Box 827
Lexington, NE 68850

New Hampshire

Dr. Gregory D. Gill
University of New Hampshire
Palmer House
Durham, NH 03824
(603) 862-1452

New Jersey

John Cummings
56 Lakeview Avenue
Clinton, NJ 08809
(201) 735-7826

New Mexico

Mary Nesbitt
304 Sunland
Clovis, NM 88101
(505) 763-7558

Nevada

Richard Reid
1887 Wagonwheel
Las Vegas, NV 89119
(702) 451-1088

New York

Frank E. Sharkey
State University
Upton 220
1300 Elmwood Avenue
Buffalo, NY 14222
(716) 878-4717

Ohio

Linda K. Giles
Licking County
JVS 150 Prince Road
Newark, OH 43055
(614) 366-3351

Oklahoma

Charlotte E. Fowler
Twin Crk. Apts. 52G
1400 N. Perkins Road
Stillwater, OK 74074
(405) 377-2287

Oregon

Lee Ammons
Owen Sabin Skills Center
14211 SE Johns Road
Milwaukee, OR 97222
(503) 653-3488

Pennsylvania

Dorothy Dra Zenovich
10375 Perry Highway
Wexford, PA 15080
(412) 935-5767

Rhode Island

Robert Brooks
 Providence School
 Dept. 86, 4th Street
 Providence, RI 02886
 (412) 935-5767

South Carolina

Mo Alexander
 Hillcrest High School
 Simpsonville, SC
 (803) 963-5551

South Dakota

Roger Carlson
 Wessington Springs High School
 Wess Springs, SD 57382
 (605) 539-9311

Tennessee

Janice Van Dyke
 State Technical Institute
 5983 Macon Cove Road
 Memphis, TN 38134
 (901) 388-1200

Texas

George H. Lowther
 2416 W. Hermosa
 San Antonio, TX 78201
 (512) 824-7536

Utah

Dr. Harold Johnson
 Box 482
 Ephraim, UT 84627
 (801) 283-4546

Virginia

James E. Brown
 2011 N. Culpepper Street
 Arlington, VA 22207
 (703) 527-7792

Vermont

Joel Moore
 Fairview Square
 Fairlee, VT 05045

Washington

Reuben Stueckle
 Puyallup School District
 Puyallup, WA 98371
 (206) 848-3501

Wisconsin

William Neverdahl
 VTAE District 1
 620 W. Clairmount
 Eau Claire, WI 54701
 (715) 836-3997

West Virginia

Albert E. Everly, III
 852 Vandalia Road
 Morgantown, WV 26505
 (304) 292-3361

Wyoming

Beverly Harkins
 Box 359
 Jackson, WY 83001
 (307) 733-3148

STATE DEPARTMENTS OF EDUCATION PERSONNEL GUIDANCE AND
PERSONNEL SERVICES

Alabama

Pupil Personnel Services
Division of Instructional
Services
State Department of Education
607 State Office Building
Montgomery, AL 36130
(205) 832-5200
Clinton R. Owens, Acting
Director
Floyd R. Johnson, Jr.,
Specialist
Thelma M. Jones, Specialist
Walter G. Nelson, Specialist

Alaska

Department of Education
Pouch F
Juneau, AK 99811
(907) 465-2841
Charlie Mae Moore, Program
Manager
Educational Standards

Arizona

Department of Education
1535 West Jefferson
Phoenix, AZ 85007
(602) 271-5414
Randy Eubank, Supervisor
Guidance and Counseling
Coordinating Unit

Arkansas

State Department of Education
107 W. Arch Ford Education
Little Rock, AR 72201
(501) 371-1867
William Delaine Johnson,
Coordinator
Guidance Services

Arkansas (Continued)

Guylene Dwyer, Guidance
Specialist
James Washburn, Guidance
Specialist
Richard Carter, Guidance
Specialist

California

State Department of Education
Personal and Career Development
721 Capitol Mall
Sacramento, CA 95814
Anne Upton, Program Adminis-
trator
Joseph Cunha, Consultant
Donald Exter, Assistant II-
Fiscal
Stanley Greene, Consultant
Marcelett Henry, Consultant
Darrell Holt, Consultant
Bruce Lowrey, Consultant
Joseph McGhee, Consultant
Career Education
Jay Rollins, Consultant
Lee Sheldon, Consultant
Milton Wilson, Consultant

Colorado

State Department of Education
State Office Building
201 East Colfax
Denver, CO 80203
(303) 839-2234
Jerry L. Terrill, Consultant
Guidance and Counseling

Connecticut

Bureau of Vocational-Technical
Education
P.O. Box 2219
Hartford, CT 06115
(203) 566-4383
Angelo Tedesco, Chief
Richard Wilson, Consultant

Bureau of Pupil Personnel and
Special Educational Services
P.O. Box 2219
Hartford, CT 06115
(203) 566-2284
Tom B. Gillung, Chief
Clarence "Clay" Steinberger,
Consultant
Guidance Services

Delaware

Department of Public Instruction
Townsend Building
Dover, DE 19901
(302) 678-4888
Clifton Hutton, State Supervisor
Guidance/Pupil Personnel
Services

District of Columbia

Division of Student Services
Pupil Personnel Services Branch
415 12th Street, N.W., Room 906
Washington, D.C. 20004
(202) 724-4185
Nathaniel E. Hill, Director
Counseling and Career Section

Bryan T. Gray, Chief
Guidance and Counseling Branch
Department of Health, Education
and Welfare
Office of Education
400 Maryland Avenue, S.W.
ROB #4, Room 3012
Washington, D.C. 20202
(202) 472-1357

Florida

Department of Education
Scott Building
101 West St. Augustine Street
Tallahassee, FL 32304
(904) 488-8974
Donald E. Darling, Adminis-
trator
Student Services Section
Dale Ake, Consultant
Adult and Vocational
Guidance
Annabel M. Brantley, Consultant
Middle and Secondary
Guidance
Billie Jackson, Consultant
Elementary Guidance
Otis Mobley, Consultant
Occupational and Placement
Specialist
Josephine Newton, Consultant
School Social Work
James Eikeland, Consultant
School Psychology

Georgia

State Department of Education
258 State Office Building
Atlanta, GA 30331
(404) 656-2608
Neil C. Gunter, Director
Student Support Services
Ray Bouchillon, Consultant
Career Education
Jim Conkwright, Consultant
Guidance and Counseling
Services
O.C. Hill, Consultant
Guidance and Counseling
Services
Verdree Lockhart, Consultant
Guidance and Counseling
Services

Guam

Government of Guam
 Department of Education
 P.O. Box DE
 Agana, Guam 96910
 Country Code (617) 472-8552
 Ronald B. Stewart, Administrator
 Pupil Personnel Services

Hawaii

State Department of Education
 1270 Queen Emma Street, Room 902
 Honolulu, HI 98613
 (808) 548-7819
 Nancy Honda, Education Specialist
 Guidance, Counseling and
 Career Education

Idaho

State Department of Education
 Len B. Jordan Building
 Boise, ID 83720
 (208) 334-3813
 Leila Lewis, Consultant
 Pupil Personnel/Career
 Education

Illinois

State Board of Education
 100 North First Street
 Springfield, IL 62777
 (217) 782-6601
 Sheryl Poggi, Pupil Personnel
 Specialist

Indiana

Department of Public Instruction
 Division of Pupil Personnel
 Services
 Room 229, State House
 Indianapolis, IN 46204
 (317) 927-0241
 Marvin Hershenson, Director
 Donald J. Zimmerman
 Assistant Director & Consultant
 Counseling and Guidance

Indiana (Continued)

Judy Rogers, Consultant
 Counseling and Guidance
 Dennis Jackson, Consultant
 Counseling and Guidance
 Laura Swanson, Consultant
 Elementary Counseling

Iowa

Iowa Department of Public
 Instruction
 Grimes State Office Building
 Des Moines, IA 50319
 Giles J. Smith, Chief
 Guidance Services Section
 James E. Forsyth, Consultant
 Guidance Services Section
 Gary Henrichs, Consultant
 Guidance Services Section
 Edward L. Ranney, Consultant
 Guidance Services Section

Kansas

Kansas State Department of
 Education
 110 East Tenth Street
 Topeka, KS 66612
 (913) 296-3379
 Willard Foster
 Guidance & Testing Specialist
 Judith Hamilton
 Guidance & Testing Specialist
 Tom Henley
 Elementary Guidance
 Specialist

Kentucky

Department of Education
 First Floor, Capitol Plaza Tower
 Frankfort, KY 40601
 (502) 564-3678
 Curtis Phipps, Director
 Bill Braden, Unit Director
 Occupational Guidance
 John M. Cole, Unit Director
 Elementary & Secondary Guidance

Kentucky (Continued)

Agnes Hopper, Unit Director
 Social Work
 Dianne Caines, Consultant
 Health Services
 Don Burchett
 Area Consultant-Supervisor
 C. Stan Glenn
 Area Consultant-Supervisor
 Pat Guthrie
 Area Consultant-Supervisor
 Lana Pennington
 Area Consultant-Supervisor
 Eddie Jackson
 Area Consultant-Supervisor
 Jane Scarbrough
 Area Consultant-Supervisor
 Angela Wilkins
 Area Consultant-Supervisor
 John Wright
 Area Consultant-Supervisor

Louisiana

Bureau of Student Services
 State Department of Education
 P.O. Box 44064
 Baton Rouge, LA 70804
 (504) 342-3473
 Ray Clement, Director
 Francis Antill, Assistant Director
 Fair C. King, Section Chief
 Guidance and Counseling
 State Career Education
 Coordinator
 Mary Tauzin, Coordinator
 Joseph Cotten, Supervisor
 Barry T. Solar, Supervisor

Maine

Department of Education
 Station 23
 Augusta, ME 04333
 (207) 289-2033
 Betty L. McLaughlin, Director
 Guidance, Counseling, Testing

Maryland

State Department of Education
 P.O. Box 8717, BWI Airport
 Baltimore, MD 21240
 (301) 796-8300
 (Vacant Position)
 Vocational Guidance
 George Malless, Specialist,
 Guidance

Massachusetts

Massachusetts Department of
 Education
 31 St. James Avenue
 Boston, MA 02116
 (617) 727-5757
 Charles Brovelli, State
 Coordinator
 Career Guidance Education
 Maxine Minkoff, State
 Coordinator
 Guidance and Counseling
 Bureau of Student Services
 Joan Schuman, Director
 Bureau of Student Services

Pittsfield Regional Education
 Center
 188 South Street
 Pittsfield, MA 01201
 Allison Tracy, Career Guidance
 Specialist

Northeast Regional Education
 Center
 219 North Street
 N. Reading, MA 01864
 Maureen O'Connell, Career
 Guidance Specialist

Southeast Regional Education
 Center
 P.O. Box 29
 Middleboro, MA 02346
 Bryna Kaufman, Career Guidance
 Specialist

Massachusetts (Continued)

Central Massachusetts Regional
Education Center
Beaman Street, Route 140
West Boylston, MA 01583
Tom McCarver, Career Guidance
Specialist
Betty Gomes, Career Guidance
Specialist

Michigan

State Department of Education
P.O. Box 30008
Lansing, MI 48909
(517) 373-1434
Claudette Nelson, Supervisor
Student Support Program
Gary Cass, Consultant
Guidance and Counseling

Minnesota

State Department of Education
Sixth Floor, Capitol Square Building
St. Paul, MN 55101
(612) 296-4080
Reynold Erickson, Manager
Pupil Personnel Services
G. Dean Miller, Specialist
Elementary & Secondary Guidance
Phyllis Paul, Specialist,
Career Guidance

Mississippi

State Department of Education
P.O. Box 771
Jackson, MS 39205
Clarice Mooney, Supervisor
Guidance and Counseling

Missouri

State Department of Elementary and
Secondary Education
P.O. Box 480
Jefferson City, MO 65102
(314) 751-3545

Missouri (Continued)

Charles Foster, Director
Pupil Personnel Services
Edgar Ailor, Supervisor
Guidance Services
William Brandt, Supervisor
Guidance Services
Carol Jones, Supervisor
Guidance Services
Ruth Pair, Supervisor
Guidance Services
Charles Oviatt, Assistant
Director, Testing & Assessment

Marion Starr, Supervisor
Career Education

Montana

There is no longer a position in
this Department of Education for
Guidance and Counseling. A void
exists.

Nebraska

State Department of Education
State Office Building
301 Centennial Mall, South,
Box 94987
Lincoln, NB 68509
(402) 471-2446
Roger Hudson, Director
Student Personnel Services
Kathleen Conway, Consultant
Career Education

Nevada

Nevada Department of Education
Capitol Complex
400 West King Street
Carson City, NV 89710
(702) 855-5700
Frank R. Brown, Consultant
Pupil Personnel Services

New Hampshire

Department of Education
 64 North Main Street
 Concord, NH 03301
 (603) 271-2664
 James V. Carr, Consultant
 Guidance Services
 Claire E. VanZandt, Consultant
 Vocational Guidance Services

New Jersey

State Department of Education
 225 West State Street
 Trenton, NJ 08625
 (609) 292-7605
 Donna Cubit-Swoyer, Director
 Career Counseling and Guidance
 Jacqueline Stefkovich, Consultant
 Guidance and Counseling

New Mexico

State Department of Education
 State Capitol Complex
 Santa Fe, NM 87503
 (505) 827-5441
 Carol Sue Nordengren, Director
 Guidance Services

New York

New York State Education Department
 55 Elk Street
 Albany, NY 12234
 (518) 474-6943
 Edward C. Strack, Chief
 Bureau of Guidance
 Gwendolyn G. Ripp, Supervisor
 Bureau of Guidance
 John P. Stebbins, Supervisor
 Bureau of Guidance
 Janet Andre, Career Education
 Specialist
 Joseph J. Gerdin, Associate
 John P. Harrison, Associate
 Robert B. MacMullen, Associate
 Kenneth E. York, Associate
 Virgil L. January, Associate
 John Soja, Associate

North Carolina

North Carolina Department of
 Public Instruction
 Division of Pupil Personnel
 Services
 Raleigh, NC 27611
 (919) 733-4396
 Thelma C. Lennon, Director
 Division of Pupil Personnel
 Services
 Alice T. Solomon, Coordinator
 Guidance Services
 Ron Anderson, Elementary
 Consultant
 John Jack Knox, Middle/Junior
 High Consultant
 Jean Leigh, Secondary
 Consultant

North Dakota

Department of Public Instruction
 Guidance Services Section
 State Capitol
 Bismarck, ND 58505
 (701) 224-2391
 Dave Lee, Director
 Guidance Services & ESEA
 Title IV-C
 Lyle Evenson, Assistant
 Director
 Guidance Services
 G. David Massey, Coordinator

Ohio

State Department of Education
 65 South Front Street
 Columbus, OH 43215
 (614) 466-9223
 Raymond A. Wasil, Director
 James H. May, Assistant
 Director Guidance, Counseling
 and Development Services
 John L. Chatman, Consultant
 Linda C. Nusbaum, Consultant
 Wanda L. Harewood, Consultant
 Paul E. Kohli, Consultant
 Janice D. Williams, Consultant

Ohio (Continued)

Kenneth R. Higgins, Assistant
Director
Ohio Testing Services
Janet E. Crandell, Test Development
Consultant
E. Roger Trent, Test Development
Coordinator
Louis C. Vild, School Testing
Programs

Oklahoma

State Department of Education
Guidance and Counseling Section
2500 North Lincoln
Oklahoma City, OK 73105
(405) 521-2426
Iris Bruce, Administrator
Mary Corry, Coordinator
Jim Cox, Coordinator
Gerald Engel, Coordinator
Charles Greene, Coordinator
Lyndol Jones, Coordinator
Frank Nichols, Coordinator

Oregon

Student Services Section
Oregon Department of Education
942 Lancaster Drive, N.E.
Salem, OR 97310
(503) 378-8923 (Director)
(503) 378-4765 (Specialists)
Les Adkins, Director
Student Services
Charlotte Ann Connor, Specialist
Career and Vocational Counseling
and Guidance
Gary Dennerline, Delinquency
Prevention Specialist
Les Martin, Specialist
Counseling and Guidance
Claude Morgan, Child Development
Specialist
Don Perkins, Specialist
Student Activities/Counseling
and Guidance

Pennsylvania

Pennsylvania Department of
Education
Division of Student Services
333 Market Street
Harrisburg, PA 17126
(717) 787-6576
W. R. Logan, Chief
Robert Cox, Guidance and
Counseling Coordinator
Elmer Hensler, Guidance
Consultant
Richard May, Guidance
Consultant
Biagio Musto, Guidance
Consultant
Bruce Shellenberger, Guidance
Consultant
Marian Lohr, School Health
Services Coordinator

Puerto Rico

Department of Education
Guidance Program
Box 759
Hato Rey, Puerto Rico 00919
(809) 764-5422
Luis A. Campos, Guidance Program
Director
Nerys Alvarez, Guidance
Supervisor
Olga Arocho, Guidance Supervisor
Monserrate Martinez, Guidance
Supervisor
Francisco del Moral, Guidance
Supervisor
Asuncion Munoz, Guidance
Supervisor
Juan Rosario, Guidance Supervisor
Eulalia Soto, Guidance Supervisor
Julia Perez, Guidance Supervisor

Rhode Island

Department of Education
235 Promenade Street
Providence, RI 02908
(401) 277-2617
Loreto Gandara, Title IV C/C
Consultant

South Carolina

State Department of Education
706 Rutledge Building
Columbia, SC 29201
(803) 758-3696

Joel Taylor, Chief Supervisor
Virginia C. Craig, Elementary
Guidance Consultant

Robert S. Moore, Coordinator
Guidance Unit

Lynnette S. Robinson, Middle School
Guidance Consultant

John R. Williams, Secondary School
Guidance Consultant

South Dakota

Division of Elementary and Secondary
Education

Richard F. Kneip Building
Pierre, SD 57501

(605) 733-3371 or 733-4678

Robert Huckins, Director
Student Services

Tennessee

Charles C. Sams
Director of Guidance
114 Cordell Hull Building
Nashville, TN 37219
(615) 741-1896

Jerry Gaither
Specialist in Pupil Services
805 1/2 Nashville Highway
Columbia, TN 38401

Robert Lamb
Specialist in Pupil Services
C.S.C.C., Room 201
Administration Building
Cleveland, TN 37311

Linda Moon
Specialist in Pupil Services
309 11th Avenue, South
Smyrna, TN 37167

Tennessee (Continued)

Royce Parman
Specialist in Pupil Services
813 Broadway at Gill
Knoxville, TN 37917

Betty C. Wheat
Specialist in Pupil Services
125 Gooch Hall, U.T. Martin
Martin, TN 38238

R. Steve Crawford
Specialist in Pupil Services
State Department of Education
Memphis State University
Memphis, TN 38152

Texas

Division of Student Services &
Instructional Coordination
Texas Education Agency
201 East Eleventh Street
Austin, TX 78701
(512) 475-4276

Dr. James Clark, Director
Division of Guidance
John Lucas, Chief Consultant
Guidance

Arnulfo Balboa, Consultant
Guidance

Mary E. Manning, Consultant
Visiting Teachers & School
Health Services

Charles Merrill, Consultant
Small School Guidance

Sue Mihalik, Consultant
Elementary School Guidance

John Ridener, Consultant
Guidance & Psychological
Services

James Salmon, Consultant
Guidance

Utah

Division of Curriculum and Instruction
 Utah State Office of Education
 250 East 500 South
 Salt Lake City, UT 84111
 (801) 533-6040
 Keith D. Steck, Specialist
 Pupil Advocacy
 R. Russell Whitaker, Specialist
 Counseling and Guidance

Vermont

Vermont Department of Education
 State Office Building
 Montpelier, VT 05602
 (802) 828-3141
 Shirley M. Reid, Consultant
 Guidance and Health Services

Virgin Islands

United States Virgin Islands
 Department of Education
 P.O. Box 630
 St. Thomas, U.S. Virgin Islands 00801
 (809) 774-5191
 Rehenia A. Gabriel
 Pupil Personnel Services

Department of Education
 P.O. Box I
 Christiansted, St. Croix
 U.S. Virgin Islands 00820
 (809) 773-1095
 Robert Hendry, Coordinator
 Guidance Services

Virginia

Department of Education
 P.O. Box 60
 Richmond, VA 23216
 (804) 786-2615
 John R. Cook, Supervisor
 Guidance Services
 Newell J. Anderson, Jr.
 Assistant Supervisor of Guidance

Virginia (Continued)

Don S. Ayers
 Assistant Supervisor of
 Guidance
 Libby R. Hoffman
 Vivian N. Williamson
 Assistant Supervisor of
 Guidance
 O. Pauline Anderson
 Assistant Supervisor of
 Guidance
 State Department of Education
 Guidance Service
 Russell Hall
 900 Fairfax Street
 Radford, VA 24141

Washington

Superintendent of Public
 Instruction
 Old Capitol Building
 Olympia, WA 98504
 (206) 753-6724
 Marjorie Anderson, Director
 Pupil Personnel Services
 Vivian Harlin, Director
 School Health Services

West Virginia

State Department of Education
 Capitol Complex, Room B-057
 Charleston, WV 25305
 Keith C. Smith, Director
 Special Education & Student
 Support Systems
 (304) 348-2034

William E. Mullett, Coordinator
 Student Support Services
 (304) 348-2703

Therese Wilson, Guidance
 Specialist
 (304) 348-2704

Wisconsin

Pupil Services Section
Department of Public Instruction
125 Langdon Street
Madison, WI 53702
(608) 266-2829

Richard R. Roth, Director
Pupil Services

William J. Erpenbach, Supervisor
Counseling and Guidance Services

Dennis Van Der Heuvel, Supervisor
Counseling and Guidance Services

Wyoming

State Department of Education
Hathaway Building
Cheyenne, WY 82001
(307) 777-7411

James Anderson
Career Guidance Consultant

APPENDIX D

FOLLOW-UP LETTER

FOLLOW-UP LETTER TO STATE DIRECTORS OF VOCATIONAL EDUCATION,
STATE DIRECTORS OF COUNSELING, STATE SEX EQUITY COORDINATORS,
PRESIDENTS OF STATE VOCATIONAL ASSOCIATIONS

2811 French Broad Lane
Knoxville, TN 37914
May 16, 1980

On April 10 you were mailed a questionnaire designed to provide information indicating your opinion of factors influencing the enrollment of females into non-traditional vocational education programs as perceived by educational personnel throughout the nation.

In order for this study to be meaningful it is necessary that your response to the questionnaire be included.

At this time I have not received your input which is greatly needed. If you have not completed and mailed the questionnaire, please do so today. Please disregard this letter if you have already responded.

Thank you for your cooperation in making this study a success.

Sincerely,

S. Carolyn Burkhart
Researcher and Graduate
Student
The University of Tennessee

SCB:scv

VITA

S. Carolyn Burkhart, daughter of Harold M. and Inez S. Burkhart, was born August 21, 1937 in Knoxville, Tennessee. She attended elementary and secondary schools in Knox County and graduated from Central High School in 1955. She entered The University of Tennessee, Knoxville in the fall of 1955 and received the Bachelor of Science degree in Home Economics with a major in Foods and Institutional Management in June, 1959.

Fifteen years of her educational experience involved six years of teaching home economics, six years in elementary education, and three years in vocational orientation. She was awarded the Education Professions Development Program from the State of Connecticut for one year at The University of Tennessee, Knoxville. She received her Master of Science degree in Home Economics Education from The University of Tennessee, Knoxville in 1977.

She is presently an administrative intern at Karns High School in Knox County, Knoxville, Tennessee. Major emphasis in her doctoral program was administration and supervision with special emphasis on vocational-technical education.