

# VOCATIONAL EDUCATION SEX EQUITY REPORT

Secondary 1981



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COUNCIL ON THE ECONOMIC STATUS OF WOMEN

LEGISLATIVE REFERENCE LIBRARY STATE OF MINNESOTA

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# CEGISLATIVE REFERENCE LIBRARY STATE OF MINNESOTA

## Introduction

The last decade has witnessed a growing awareness of the need to provide equal opportunity in vocational education. Preparation for employment plays an important role in a society where the majority of adults, both men and women, will be employed for most of their lives.

In response to this need, both state and federal laws now require schools to provide equal opportunity in education as well as in employment. Title IX requires the elimination of sex discrimination in all aspects of education, while Title II requires the elimination of sex bias and sex stereotyping at every level of vocational education. In addition, Minnesota statutes require each school district to file assurances of compliance with state and federal sex equity laws.

In 1978, the Council on the Economic Status of Women contracted with the Minnesota Department of Education to provide information which schools could use to evaluate progress toward these goals. Project objectives were to gather and analyze data on the status of male and female students and staff in vocational education in the state, and to make this information available to schools, government agencies, and interested persons.

This report is the first in a series of reports presenting information about students and staff in secondary-level vocational programs. "Vocational" programs are defined as those receiving reimbursement administered by the Minnesota Vocational Technical Division of the Department of Education. Generally, the format of this report is similar to that used in previous Council reports on vocational education at the post-secondary level.

Most of the data presented here was made available through the Minnesota Civil Rights Information System, or MINCRIS, as reported by local school districts to the Minnesota Department of Education. MINCRIS is a new system which provides extensive data by sex and race for the first time. This report gives state total enrollments, as reported on October 1, 1980 for the 1980-81 school year. Information for individual school districts is available from the Equal Educational Opportunities Section, Minnesota Department of Education.

Student follow-up information in this report was made available by the Minnesota Research and Development Center for Vocational Education, as reported by a sample of local school districts in the state.

The data presented here serves as a baseline, illustrating current patterns by sex for enrollments and staff employment. In future years, it will be possible to analyze changes in these areas, in order to determine whether measureable progress is being made toward the goal of sex equity in secondary vocational education.

## **Vocational Enrollments, 1980**

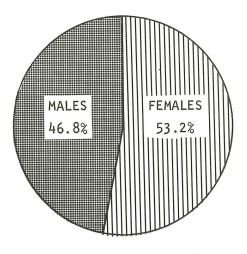
Total enrollments in high school vocational programs statewide in October 1980 were 145,347.\* Of these, about 96 percent were enrolled in programs related to seven vocational curriculum areas, with the remaining 4 percent enrolled in special needs programs.

Vocational enrollments vary considerably by grade level, with almost half of all high school vocational enrollments at the twelfth grade level. Total enrollments are 24,445 for tenth grade, 50,621 for eleventh grade, and 64,090 for twelfth grade. Students whose grade level was not reported accounted for an additional 6,191 students.

Female students represent a slight majority of those enrolled in one or more vocational courses, 53 percent, although they represent only 49 percent of all students enrolled in grades ten through twelve statewide. Enrollment patterns generally do not vary by grade level, although females are slightly more likely than males to be enrolled in a vocational program at the higher grade levels.

Minority race students represent 3.6 percent of those enrolled in one or more vocational courses, slightly lower than their representation among all students enrolled in grades ten through twelve, 4.1 percent. Minority females, like their white counterparts, are slightly more likely to be enrolled in vocational courses than are minority males.

## SECONDARY VOCATIONAL ENROLLMENTS, 1980



145,347 ENROLLMENTS

\*This figure as well as other enrollment data in this report may represent a duplicated count of students, since some students may be enrolled in more than one vocational course at a time.

## **Enrollment by Curriculum Area, 1980**

Significant differences occur among the vocational curriculum areas, both for overall enrollments and for enrollment patterns by sex and race. The chart below summarizes these differences, and the following pages present more detailed information for each program area.

As might be expected, male students are most likely to be enrolled in trade and industrial programs. This area, combined with agriculture programs, accounts for 59 percent of all male vocational enrollments. By contrast, less than 10 percent of females are enrolled in trade and industrial and agriculture programs combined.

Female students are most likely to be enrolled in home economics programs, representing more than half of all female enrollments. Office occupations programs represent an additional one-fourth of all female students. By contrast, less than 20 percent of the male enrollees are in home economics and less than 10 percent are in office occupations.

Enrollment patterns of minority students also vary by sex. Home economics accounts for half of all vocational enrollments of minority females, but for only 21 percent of minority males. Trade and industrial courses account for more than one-third of all vocational enrollments among minority males, but for only 6 percent of minority females.

SECONDARY VOCATIONA	L ENROLLMENTS, 1980	MALE
AGRICULTURE	**************************************	14.4%
DISTRIBUTION		5.5%
HEALTH	<b>∳</b> Ů	2.3%
HOME ECONOMICS	<b>*************************************</b>	35.5%
OFFICE		19.3%
TECHNICAL		0.5%
TRADE & INDUSTRIAL		18.2%
SPECIAL NEEDS	1100	4.3%

Each figure represents 1% of total enrollments, or 1,453 enrollees.

# **Agriculture**

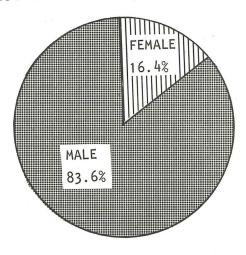
Total enrollment statewide in high school agriculture courses is 20,983, accounting for 14 percent of all high school vocational enrollments.

Agriculture courses are predominantly male, with male students outnumbering female students by five to one at all grade levels. More than half of female students are enrolled in Agricultural Production, Animal Science, or Ornamental Horticulture, while more than half of male students are enrolled in Agricultural Production, Farm Management, and/or Agricultural Mechanics.

Enrollments in this area show a more significant difference by race than any other curriculum area, with agriculture accounting for 15 percent of all white students but for only 5 percent of all minority students in vocational programs. Minority enrollment in this area generally reflects the lower representation of minorities in Minnesota's non-metropolitan farm population.

Minority female students are even less likely than their male counterparts to be enrolled in agriculture courses. This curriculum area accounts for less than 2 percent of minority female vocational students, 5 percent of white female students, 7 percent of minority male students, and 27 percent of white male students.

# AGRICULTURE ENROLLMENTS, 1980



20,983 ENROLLMENTS

## **Distributive Education**

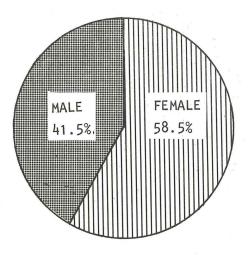
Total enrollment statewide in high school distributive education courses is an even 8,000, accounting for 6 percent of all secondary vocational enrollments.

Although female students have a slightly larger total enrollment than males, distributive education is the most evenly balanced by sex of all the curriculum areas. This is particularly true for eleventh and twelfth grade enrollments, while tenth grade enrollments are primarily female. As in other curriculum areas, most distributive education students are in the twelfth grade.

Two programs, General Merchandising and General Marketing Occupations, account for more than half of male enrollments and for more than half of female enrollments in this area -- and both courses are fairly evenly balanced by sex. One distributive education course has no male students and one course has no female students.

About 3 percent of all distributive education students are minorities, very close to the overall representation of minority students in vocational programs. Like their white counterparts, minority females are slightly more likely than minority males to be enrolled in this curriculum area.

#### DISTRIBUTIVE EDUCATION ENROLLMENTS, 1980



8,000 ENROLLMENTS

## **Health Occupations**

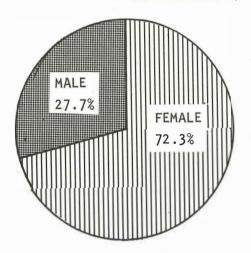
Total enrollment statewide in high school health occupations programs is 3,321, accounting for less than 3 percent of all vocational enrollments. After technical education, health occupations have the smallest number of high school students enrolled.

Health programs are predominantly female, with female students outnumbering male students by almost three to one overall. This pattern is most apparent at the eleventh and twelfth grade levels, which together account for 93 percent of health occupations students. Tenth grade health programs are fairly evenly balanced by sex.

More than half of all health students are enrolled in the general Health Care Occupations program. Almost three-fourths of all female health students are enrolled in this program, but only 11 percent of male health students are enrolled in Health Care Occupations.

Minorities account for 1.4 percent of health students. Both male and female minority students are slightly less likely than white students to be enrolled in this curriculum area, with the number of minority females exceeding the number of minority males.

#### HEALTH OCCUPATIONS ENROLLMENTS, 1980



3,321 ENROLLMENTS

## **Home Economics**

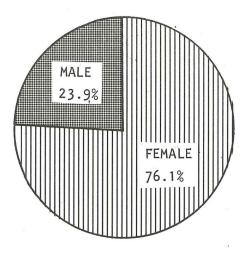
Total enrollment statewide in high school home economics courses is 51,557, accounting for 35 percent of all secondary vocational enrollments. Home economics has the largest number of female students, and the largest total number of students, of all curriculum areas. Nine out of 10 of these enrollees are in consumer homemaking programs, with the remainder in occupational home economics.

Female students outnumber male students by three to one at every grade level in home economics programs. Each individual course has more female students than male students, although there are no female-only courses.

Two programs, Consumer Homemaking and Consumer Foods and Nutrition, account for half of female enrollments and for two-thirds of male enrollments. Both courses, however, have more female students than male students. Other programs with large enrollments of female students are Child Development, Clothing and Textiles, and Family Relations.

Overall enrollments of minority students in home economics is the same as for whites -- 36 percent -- and for each racial group there are more female enrollees than males. Minority females enrolled in home economics account for about half of all female minority vocational enrollments, the same proportion as for white females.

#### HOME ECONOMICS ENROLLMENTS, 1980



51,557 ENROLLMENTS

# **Office Occupations**

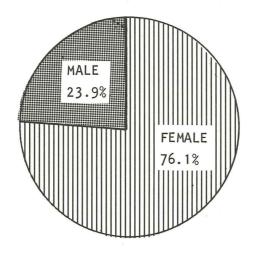
Total high school enrollment statewide in office occupations programs is 28,043, accounting for about one-fifth of all secondary vocational enrollments. Office occupations has higher total enrollments than any other area except home economics.

Female students outnumber male students by more than three to one in eleventh and twelfth grade office occupations programs, and these grade levels account for 81 percent of enrollments in this area. Courses are somewhat more balanced at the tenth grade level, where female students outnumber male students by about two to one.

Female students are fairly evenly distributed among the various programs, but they are more likely to be enrolled in General Secretarial or Stenographer/Secretary than in other programs. They represent the majority of students in all programs except Data Processing II, Business Law, and Economics. Four courses have no male students: Medical Clerical, Traffic Office Clerk, Court Reporter, and Legal Secretary.

Overall, minority students are slightly less likely than white students to be enrolled in office occupations programs. This curriculum area accounts for 28 percent of white female students, 24 percent of minority female students, 10 percent of white males, and 12 percent of minority males.

### OFFICE OCCUPATIONS ENROLLMENTS, 1980



28,043 ENROLLMENTS

## **Technical Education**

Total enrollment statewide in high school technical education programs is 791, accounting for one-twentieth of all secondary vocational enrollments. This curriculum area is unique in two ways: it contains the smallest number of students of all curriculum areas, and enrollments in technical programs are the least balanced by sex.

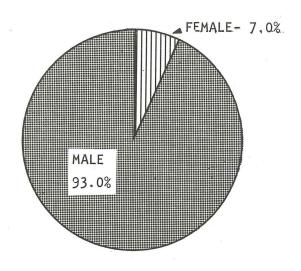
Male students account for 95 percent of twelfth grade technical students, 97 percent of eleventh grade technical students, and 91 percent of tenth grade technical students. Like all other curriculum areas, the majority of technical students are in the twelfth grade.

Electronics Technology accounts for about half of male students but only 11 percent of female students enrolled in technical education programs, while Automotive Technology accounts for 27 percent of male students and 24 percent of female students. These programs account for the majority of all students.

Male students outnumber female students in every program except Food Lab Management, and four programs have no female students.

About 1 percent of technical students are racial minorities, with no female minority students enrolled in this area. Although overall enrollments of technical students are so low that differences may not be statistically significant, minority males appear to be less likely than white males to be enrolled in these programs.

#### TECHNICAL OCCUPATIONS ENROLLMENTS, 1980



791 ENROLLMENTS

## **Trade & Industrial**

Total enrollment statewide in high school trade and industrial programs is 26,428, accounting for one-fifth of all secondary vocational enrollments. More male students, however, are enrolled in this area than in any other vocational area, representing one out of three male students. Trade and industrial also has the largest number of program offerings.

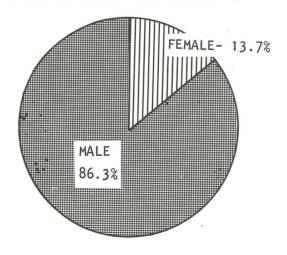
Overall, male trade-industrial students outnumber female trade-industrial students by six to one. This ratio varies somewhat by grade level, with a larger proportion of female students at the twelfth grade level.

Ten programs have no female students and five programs have only one female student. Female students have the highest enrollments in Graphic Arts, Auto Mechanics, Woodworking, and Other Trade-Industrial, which together account for half of all female students.

Male students are most likely to be enrolled in Auto Mechanics, Carpentry and Finishing Trades, Construction and Maintenance Trades, and Other Trade and Industrial Occupations, together accounting for 40 percent of all male students. Personal Services has only one male enrollee, and Cosmetology has no male enrollees.

Although the majority of trade-industrial students are white males, minority students -- both male and female -- have slightly higher enrollment rates than their white counterparts. Trade and industrial enrollments account for 5 percent of white females, 6 percent of minority females, 33 percent of white males, and 37 percent of minority males.

TRADE & INDUSTRIAL ENROLLMENTS, 1980



26,428 ENROLLMENTS

## **Special Needs**

School districts report enrollments of students who can be identified as physically handicapped, economically disadvantaged, and/or who have limited English proficiency, for each occupational program. These figures, like all enrollment data in this report, may refer to a duplicated count of students.

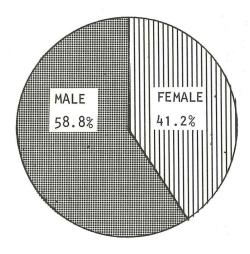
Although female students represent 53 percent of total vocational enrollments in secondary schools, their representation is somewhat lower among the identified disadvantaged groups. Females account for 42 percent of the 4,671 handicapped enrollees, 43 percent of the 467 limited English enrollees, and 48 percent of the 12,793 economically disadvantaged enrollees.

In addition to the seven occupational curriculum areas as described previously, "special needs" programs have been established in the secondary schools to provide additional vocational activities. Included in these programs are work experience programs for career exploration, for the disadvantaged, and for the handicapped. Other programs include remedial related reading and math and bilingual education.

Statewide enrollment in special needs programs is 6,224, representing 4 percent of total vocational enrollments. Of these, 41 percent are female students, well below their 53 percent representation in all vocational programs. Work Experience programs account for 87 percent of enrollments in all special needs programs, and a majority of these students are male. Female students are particularly underrepresented in the Work Experience - Career Exploration program.

Minority students are more likely to be enrolled in special needs courses than their white counterparts, reflecting their higher proportion among economically disadvantaged students. Statewide, minority females are less likely than minority males to be special needs enrollees.





## **Enrollments by Program Type, 1980**

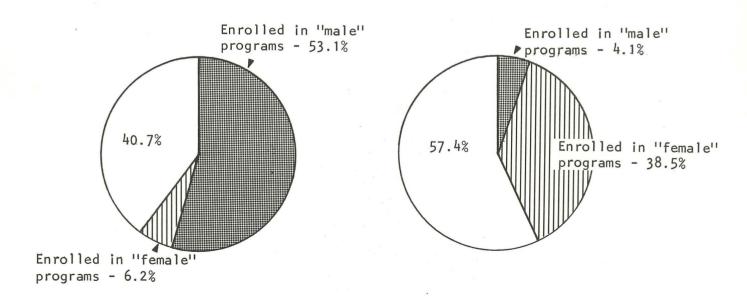
On previous pages, high school vocational programs have been examined and described by curriculum area. Programs can also be characterized by the relative numbers of male and female enrollees in each program statewide: program types which are designated as "segregated" by sex or as "integrated" by sex.

A segregated program is defined as one in which more than 80 percent of the students are of one sex. All other programs are defined as integrated. For example, Agricultural Production is a segregated program, with male students accounting for 86 percent of enrollments and female students accounting for 14 percent of enrollments. However, Animal Science is an integrated program, with 76 percent male and 24 percent female students.

Statewide, about half of all vocational students are enrolled in segrated programs and about half in integrated programs. Female students are more likely, however, than male students to be in integrated programs -- 57 percent compared to 41 percent of males.

Distributive education has the largest proportion of students in integrated programs, 92 percent of enrollments in this area, while technical education programs have the lowest proportion of students in integrated programs, 11 percent of all students enrolled in technical programs.

#### ENROLLMENT BY PROGRAM TYPE, 1980



64,354 MALE ENROLLMENTS

74,769 FEMALE ENROLLMENTS

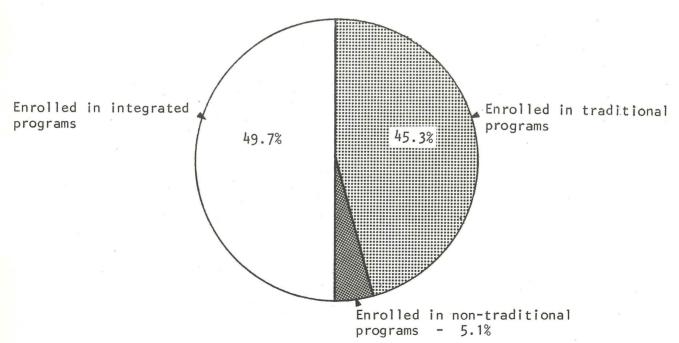
## **Traditional & Non-Traditional Enrollments, 1980**

Segregated programs may have either predominantly female or predominantly male enrollments. Students enrolled in segregated programs dominated by students of the other sex are defined as "non-traditional" students; students enrolled in programs where the total enrollment exceeds 80 percent of their own sex are defined as "traditional" students.

For example, the Nursing Assistant program, in which 97 percent of students are female while 3 percent are male, is a segregated "female" program. Female students in this program are therefore characterized as traditional students, while males in this program are non-traditional students. Similarly, Automotive Technology, where 94 percent of students are male and 6 percent are female, is traditional for male students and non-traditional for female students.

Statewide, 5 percent of vocational students are enrolled in programs which are non-traditional for their sex -- 6 percent of male enrollees and 4 percent of female enrollees. The home economics curriculum area has the largest number of non-traditional students for a total of 2,147 enrollees, or 4 percent of all home economics students. Technical programs have the smallest number of non-traditional students for a total of 19 enrollees, or 2 percent of all technical students.





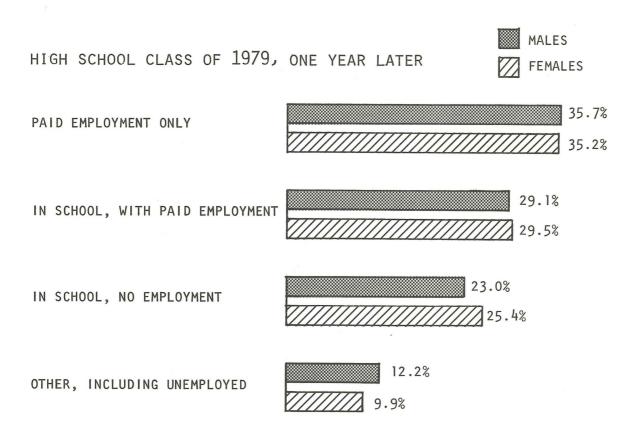
## High School Follow-Up, Class of 1979

A selected sample of school districts report information about the status of their former students one year after graduation. This information was reported in 1980 by 111 Minnesota schools for students in the Class of 1979, who completed a total of 20,437 questionnaires.

About half of former high school students continue with their education in the year after graduation, while the other half are not enrolled in any post-secondary program. Female former students are slightly more likely than their male counterparts to continue their education, while male former students are more likely to be employed.

Of the students who do continue their education after high school, about one-fourth attend a vocational school, usually one of the public Area Vocational-Technical Institutes (AVTIs). Male students, however, are more likely than females to attend an AVTI, while females are somewhat more likely than males to attend a private vocational school.

The majority of former high school students, both male and female, are likely to hold paid employment in the year following graduation. Slightly over one-third of both males and females have paid employment only, while an additional one-quarter of both males and females combine employment with further education. Most former high school students with paid employment hold full-time jobs, although female students are more likely than male students to work part-time.



# **Vocational Student Follow-Up, Class of 1979**

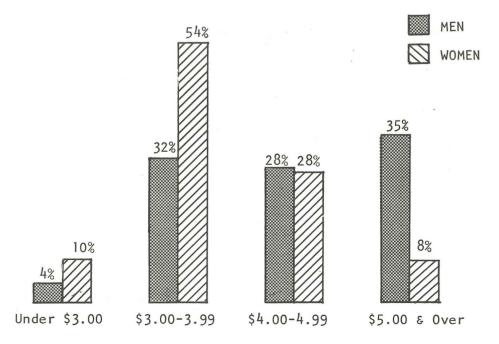
Followup information on education and employment status is also available for students who were enrolled in vocational programs during high school. In this report, such students are called "vocational graduates," although they may have taken only one vocational course in high school and they may have left school without receiving a diploma.

Overall, about one-sixth of both male and female vocational graduates are enrolled in post-secondary vocational education, while about two-thirds have paid employment one year later. Male vocational graduates are slightly more likely than their female counterparts to go on to vocational school.

The most significant differences between male and female vocational graduates, however, is in occupational group and earnings. Regardless of which curriculum area students were enrolled in during high school, female students are most likely to be clerical or service workers and male students are most likely to be employed in construction, transportation, mechanics, or production.

Female graduates have lower earnings than male graduates, and are more likely to have earnings under \$4 per hour, regardless of high school curriculum area. Male graduates have the highest earnings -- a median of \$4.82 per hour -- if they took a service occupations course, probably accounted for by the large proportion in protective services such as police or fire officers. Female graduates have the highest earnings -- a median of \$3.93 an hour -- if they took a trade and industrial program.

HIGH SCHOOL CLASS OF 1979, EMPLOYED ONE YEAR LATER



HOURLY WAGES

## **Vocational Staff Patterns, 1980**

Statewide, a total of 1,714 vocational teachers are employed at the secondary level in the seven curriculum areas -- 1,367 full-time teachers and 347 part-time teachers. Of these, 54 percent are men and 46 percent are women. In addition, there are 78 women and 173 men in program support services or who are not classified by curriculum area.

Home economics, trade and industrial, and office occupations programs account for the largest number of teachers as well as the largest number of enrollments. Teacher representation by sex in the curriculum areas corresponds generally to student enrollments, although teachers are more likely than students to be in areas traditional for their sex.

In agriculture, for example, 16 percent of students but only 7 percent of teachers are female. In both office occupations and home economics, males represent 24 percent of enrollments but less than 2 percent of the teachers.

Minorities are underrepresented among vocational teachers, accounting for only 1 percent of teachers compared with 4 percent of vocational student enrollments. In addition, there is only one minority vocational administrator in the secondary schools or the secondary centers.

Overall, there are a total of 79 vocational administrators and supervisors at the secondary level. Of these, 13 percent are women while 87 percent are men.

SECONDARY VOCATIONA	L TEACHERS, 1980	MALE	Ů FEMALE
AGRICULTURE	****************		14.9%
DISTRIBUTION	<b>****</b>		4.6%
HEALTH	<b>Ů</b> ŮŮŮŮ		5.7%
HOME ECONOMICS	ŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶŶ	VVVVV	26.7%
OFFICE			19.3%
TECHNICAL	****		4.8%
TRADE & INDUSTRIAL	**************	***	22.9%

Each figure represents 1% of total teachers, or about 17 teachers.

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VOCATIONAL ENROLLMENTS BY GRADE LEVEL AND SEX, 1980 TABLE 1.

	Tenth Grade	Grade	Eleventh Grade	h Grade	Twelfth Grade	Grade	Grade Un	specified	Total En	rollment
Curriculum Area	Male	Female	Male	Female	Male	Female	Male	Male Female	Male	Male Female
Agriculture	4,222	813	6,032	1,172	6,729	1,373	552	90	17,535	3,448
Distribution	100	220	1,137	1,578	1,935	2,692	147	191	3,319	4,681
Health	112	76	367	908	439	1,381	3	17	921	2,400
Home Economics	1,965	7,261	3,978	12,761	5,762	16,982	635	2,213	12,340	39,217
Office Occupations	1,235	2,570	2,189	8,395	2,808	9,354	463	1,029	6,695	21,348
Technical	98	10	212	7	353	18	73	20	736	55
Trade & Industrial	3,556	429	8,436	1,109	10,302	2,003	514	79	22,808	3,620
Special Needs	1,048	712	1,343	266	1,164	795	107	58	3,662	2,562
TOTAL	12,336	12,109	23,694	26,927	29,492	34,598	2,494	3,697	68,016	77,331

VOCATIONAL ENROLLMENTS BY RACE AND SEX, 1980 TABLE 2.

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Tull Area	Male	Male Female	Male	Female	Male	Female		Female	Male	Female	Male	Female
Agriculture	109	21	16	~	24	3		6	171	36	17,364	3,412
Distributive Education	23	30	6	80	18	31		57	95	126	3,224	4,555
Health Occupations	14	31	2	2	9	2		9	32	44	889	2,356
Home Economics Occupations	179	521	64	176	75	140		502	534	1,339	11,806	37,878
Office Occupations	77	189	62	89	24	73		299	298	629	6,397	20,719
Technical Occupations	_	0	8	0	-	0		0	7	0	729	55
Trade & Industrial	339	43	109	109	133	133 26		362 74	943	943 152	21,865	3,468
Special Needs	101	89	21	2	94	32		251	444	356	3,218	3,218 2,206
	843	903	271	271	327	310	1,083	1,198	2,524	2,682	65,492 74	74,649

#### AGRI CULTURE

OE Code	Course	Male	Female	Total	Percent Male	Percent Female
010100	Agricultural Production	5,192	837	6,029	86.1 %	13.9 %
010101	Animal Science	987	317	1,304	75.7 %	24.3 %
010102	Plant Science	457	95	552	82.8 %	17.2 %
010104	Farm Management	1,122	146	1,268	88.5 %	11.5 %
010110	Pet Groomer	60	41	101	59.4 %	40.6 %
010200	Agricultural Supplies, Services	340	92	432	78.7 %	21.3 %
010201	Agricultural Chemicals	45	1	46	97.8 %	2.2 %
010203	Livestock Management, Feed	574	71	645	89.0 %	11.0 %
010204	Fertilizers	72	8	80	90.0 %	10.0 %
010300	Agricultural Mechanics	2,674	124	2,798	95.6 %	4.4 %
010302	Agricultural Structures	502	8	510	98.4 %	1.6 %
010305	Agricultural Mechanics	1,178	66	1,244	94.7 %	5.3 %
010400	Agricultural Products	100	12	112	89.3 %	10.7 %
010500	Ornamental Horticulture	638	617	1,255	50.8 %	49.2 %
010501	Specialty Crop	71	10	81	87.7 %	12.3 %
010502	Floriculture	97	144	241	40.2 %	59.8 %
010504	Landscaping	230	102	332	69.3 %	30.7 %
010600	Agricultural Resources	374	85	459	81.5 %	18.5 %
010601	Natural Resources Aide	70	19	89	78.7 %	21.3 %
010603	Soil	393	86	479	82.0 %	18.0 %
010701	Forestry Management	375	69	444	84.5 %	15.5 %
010703	Forest Harvest, Logging	117	6	123	95.1 %	4.9 %
019900	Other Agriculture	1,577	443	2,020	78.1 %	21.9 %
01XXXX	Unspecified	290	49	339		
N					,	
TOTAL		17,535	3,448	20,983	83.6 %	16.4 %

#### DISTRIBUTIVE EDUCATION

OE Code	Course	_Male_	Female	Total	Percent Male	Percent Female
040100	Advertising	156	188	344	45.3 %	54.7 %
040101	Newspaper Skills/Journalism	25	68	93	26.9 %	73.1 %
040200	Apparel and Accessories	1	6	7	14.3 %	85.7 %
040300	Automotive	37	60	97	38.1 %	61.9 %
040400	Finance and Credit	4	5	9	44.4 %	55.6 %
040700	Food Services	14	104	118	11.9 %	88.1 %
040800	General Merchandising	1,013	1,427	2,440	41.5 %	58.5 %
040801	Small Business Management	2	18	20	10.0 %	90.0 %
040815	Retailing	55	64	119	46.2 %	53.8 %
040819	Fashion Merchandising	0	13	13	0.0 %	100.0 %
040823	Retail Merchandising	223	277	500	44.6 %	55.4 %
041201	Vending Repair and Merchandising	1	0	1	100.0 %	0.0 %
041600	Petroleum/Service Station	166	20	186	89.2 %	10.8 %
042200	General Marketing Occupations	919	1,311	2,230	41.2 %	58.8 %
043100	Wholesale Marketing	103	97	200	51.5 %	48.5 %
049900	Other Marketing & Distribution	302	.380	682	44.3 %	55.7 %
049909	Other Communications	53	42	95	55.8 %	44.2 %

090200

090201

090202

090203

Occupational Home Economics

Care & Guidance of Children

Food Management

Clothing Managemt, Productn & Services

Γ/	ABLE 3.	ENROLLMENTS BY PROGRAM	(con	T'D)			
	DISTRIBUT	IVE EDUCATION, continued					
	OE Code	Course	Male	Female	Total	Percent Male	Percent Female
	049932	Other Management	7	13	20	35.0 %	65.0 %
	049963	Other Sales	6	8	14	42.9 %	57.1 %
	049992	Other Supervision	75	120	195	38.5 %	61.5 %
	04XXXX	Unspecified	157	460	617		
	TOTAL		3,319	4,681	8,000	41,5 %	58.5 %
	HEALTH OC	CCUPATIONS					
	OE Code	Course	Male	Female	Total	Percent Male	Percent Female
	070101	Dental Assistant	0	26	26	0.0 %	100.0 %
	070103	Dental Lab Technician	2	19	21	9.5 %	90.5 %
	070206	Health Care Occupations	102	1,744	1,846	5.5 %	94.5 %
	070299	Other Medical Lab Technician	0	28	28	0.0 %	100.0 %
	070301	Nursing (AA)	25	0	25	100.0 %	0.0 %
	070302	Nursing LPN	129	0	129	100.0 %	0.0 %
	070303	Nursing Assistant	3	83	86	3.5 %	96.5 %
	070403	Orthotics and Prosthetics Technician	3	7	10	30.0 %	70.0 %
	070800	Mental Health Technician	87	173	260	33.5 %	66.5 %
	070905	Central Service Technician	0	12	12	0.0 %	100.0 %
	070907	EMT - Paramedic	11	12	23	47.8 %	52.2 %
	070911	Pharmacy Technician	1	8	9	11.1 %	88.9 %
	070915	Other Health & Scientific Occupations	3	11	14	21.4 %	78.6 %
	07XXXX	Unspecified	555	277	832		
	TOTAL		921	2,400	3,321	27.7 %	72.3 %
			,•	,	,		
	HOME ECON	OMICS OCCUPATIONS					
	OE Code	Course	Male	Female	Total	Percent Male	Percent Female
	090101	Consumer Homemaking	4,619	14,057	18,676	24.7 %	75.3 %
	090102	Child Developmt/Family Resource Mgmt	422	3,376	3,798	11.1 %	88.9 %
	090103	Clothing & Textiles	468	3,633	4,101	11.4 %	88.6 %
	090104	Consumer Education	528	1,249	1,777	29.7 %	70.3 %
	090105	Family Health	2	42	44	4.5 %	95.5 %
	090106	Family Relatns, Parenting, Fam Life	830	4,083	4,913	16.9 %	83.1 %
	090107	Consumer Foods & Nutrition	3,453	5,821	9,274	37.2 %	62.8 %
	090108	Home Management	9	125	134	6.7 %	93.3 %
	090109	Housing & Home Furnishings	238	1,630	1,868	12.7 %	87.3 %
	090199	Other Consumer Homemaking	169	617	786	21.5 %	78.5 %

142

88

43

700

378

441

1,247

1,038

27.3 %

6.6 %

8.9 %

40.3 %

520

484

1,335

1,738

72.7 %

93.4 %

91.1 %

59.7 %

#### HOME ECONOMICS OCCUPATIONS, continued

OE CODE	Course	Male	Female	Total	Percent Male	Percent Female
090204	Home Furnishing, Equipmt & Service	23	106	129	17.8 %	82.2 %
090206	Fashions, Fabrics & Notions	1	122	123	0.8 %	99.2 %
090208	Food Service & Management Training	201	466	667	30.1 %	69.9 %
090299	Other Service Occupations	175	258	433	40.4 %	59.6 %
09XXXX	Unspecified	229	528	757		
TOTAL		12,340	39,217	51,557	23.9 %	76.1 %

#### OFFICE OCCUPATIONS

OE Code	Course	Male	Female	Total	Percent Male	Percent Female
140100	Accounting	1,035	1,506	2,541	40.7 %	
140101	Recordkeeping	146	276	422	34.6 %	
140102	Bookkeeping	325	586	911	35.7 %	
140104	Office Machines	227	1,133	1,360	16.7 %	
140105	Banking & Finance	45	82	127	35.4 %	
140114	Income Tax Procedures	20	24	44	45.5 %	
140199	Practical Business Management	154	211	365	42.2 %	
140200	Data Processing	213	235	448	47.5 %	
140201	EDP and Programming	65	112	177	36.7 %	
140202	Data Entry	24	69	93	25.8 %	
140203	Data Processing II	53	40	93	57.0 %	43.0 %
140291	Computer Math	17	28	45	37.8 %	62.2 %
140300	Office Procedures	122	1,496	1,618	7.5 %	92.5 %
140301	Duplicating, Secretarial Procedures	8	47	55	14.5 %	85.5 %
140304	Word Processing	1	26	27	3.7 %	96.3 %
140305	Clerk/Typist	288	1,498	1,786	16.1 %	83.9 %
140308	Medical Clerical	0	4	4	0.0 %	100.0 %
140408	Business Communications	18	70	88	20.5 %	79.5 %
140505	Traffic Office Clerk	0	1	1	0.0 %	100.0 %
140700	Steno and Secretary	166	2,221	2,387	7.0 %	93.0 %
140703	Steno and Clerical	188	1,217	1,405	13.4 %	86.6 %
140704	Court Reporter	0	28	28	00 %	100.0 %
140705	General Secretarial	1,134	4,057	5,191	21.8 %	78.2 %
140707	Legal Secretary	0	3	3	0.0 %	100.0 %
140740	Secretarial Education	35	167	202	17.3 %	82.7 %
140744	Secretarial Training	90	258	348	25.9 %	74.1 %
140755	Speedwriting	5	202	207	2.4 %	97.6 %
140800	Supervisory Management	7	15	22	31.8 %	68.2 %
140805	General Office	216	927	1,143	18.9 %	81.1 %
140900	Typing	151	379	530	28.5 %	71.5 %
140901	Clerk/Typist	15	13	28	53.6 %	46.4 %
140902	Advanced Typing	94	674	768	12.2 %	87.8 %
140903	Intermediate Typing	77	342	419	18.4 %	81.6 %
140904	Beginning Typing	597	1,118	1,715	34.8 %	65.2 %

OFFICE	OCCUPATIONS,	continued
UFFICE	OCCUPATIONS,	Continued

OE CODE	Course	Male	Female	Total	Percent Male	Percent Female
149900	Business Occupations	235	1,067	1,302	18.0 %	82.0 %
149913	Related Math	60	81	141	42.6 %	57.4 %
149918	Business Law	512	465	977	52.4 %	47.6 %
149919	Economics	33	33	66	50.0 %	50.0 %
149920	Career Clinic	31	36	67	46.3 %	53.7 %
14XXXX	Unspecified	288	601	889		
					¥	
TOTAL		6,695	21,348	28,043	23.9 %	76.1 %

#### TECHNICAL OCCUPATIONS

OE Code	Course	Male	Female	Total	Percent Male	Percent Female
160104	Automotive Technology	196	13	209	93.8 %	6.2 %
160108	Electronics Technology	394	6	400	98.5 %	1.5 %
160109	Electro-Mechanical Technology	86	0	86	100.0 %	0.0 %
160110	Environmental Technology	3	1	4	75.0 %	25.0 %
160113	Quality Contro!/Mechanical Technology	2	0	2	100.0 %	0.0 %
160114	Metallurgical Technology	1	0	1	100.0 %	0.0 %
160203	Food Lab Management	7	10	17	41.2 %	58.8 %
160300	Electro-Medical Technology	3	0	3	100.0 %	0.0 %
160699	Other Miscellaneous Technical	28	20	48	58.3 %	41.7 %
160704	Communications Technology	16	5	21	76.2 %	23.8 %
TOTAL		736	55	791	93.0 %	7.0 %

#### TRADE & INDUSTRIAL

OE Code	Course	Male	Female	Total	Percent Male	Percent Female
170100	Air Conditioning	70	1	71	98.6 %	1.4 %
170105	Heating & Sheet Metal	51	0.	51	100.0 %	0.0 %
170200	Appliance Repair	3	0	3	100.0 %	0.0 %
170300	Auto Services	916	52	968	94.6 %	5.4 %
170301	Auto Body	677	13	690	98.1 %	1.9 %
170302	Auto Mechanics	4,219	293	4,512	93.5 %	6.5 %
170399	Parts Person Training	11	3	14	78.6 %	21.4 %
170400	Aviation Occupations	. 13	2	15	86.7 %	13.3 %
170500	Blueprint Reading	13	2	15	86.7 %	13.3 %
170600	Business Machine Maintenance	2	0	2	100.0 %	0.0 %
170700	Commercial Art	25	46	71	35.2 %	64.8 %
170900	Commercial Photography	13	10	23	56.5 %	43.5 %
170901	Photographic Technology	62	34	96	64.6 %	35.4 %
171000	Construction & Maintenance Trades	1,805	146	1,951	92.5 %	7.5 %
171001	Carpentry	714	90	804	88.8 %	11.2 %
171002	Electricity	391	12	403	97.0 %	3.0 %

TRADE & INDUSTRIAL, continued

OE Code	Course	Male	<u>Female</u>	Total	Percent Male	Percent Female
171014	Mobile Home Repair	6	0	6	100.0 %	0.0 %
171016	Carpentry & Finishing Trades	1,568	114	1,682	93.2 %	6.8 %
171100	Custodial & Building Maintenance	11	0	11	100.0 %	0.0 %
171300	Drafting	881	150	1,031	85.5 %	14.5 %
171301	Architectural Drafting	252	18	270	93.3 %	6.7 %
171302	Mechanical Drafting	250	38	288	86.8 %	13.2 %
171303	Technical Drafting/Mechanical Trades	74	3	77	96.1 %	3.9 %
171304	Constructn Drafting/Planning/Mgmt	294	34	328	89.6 %	10.4 %
171400	Electrical Occupations	45	0	45	100.0 %	0.0 %
171403	Motor Repair	19	4	23	82.6 %	17.4 %
171500	Electronics Occupations	249	18	267	93.3 %	6.7 %
171501	Communications	79	39	118	66.9 %	33.1 %
171502	Industrial Electronics	132	18	150	88.0 %	12.0 %
171503	Radio/Television	103	59	162	63.6 %	36.4 %
171601	Drycleaning	69	10	79	87.3 %	12.7 %
171701	Industrial Housekeeping	18	32	50	36.0 %	64.0 %
171900	Graphic Arts	1,331	788	2,119	62.8 %	37.2 %
171901	Composition, Makeup & Typesetting	29	24	53	54.7 %	45.3 %
171902	Printing Press Occupations	20	1	21	95.2 %	4.8 %
171903	Lithography, Photography, Platemaking	80	60	140	57.1 %	42.9 %
172300	Metalworking	403	5	408	98.8 %	1.2 %
172302	Machine Shop	1,088	22	1,110	98.0 %	2.0 %
172303	Machine Tool Operation	51	0	51	100.0 %	0.0 %
172304	Metal Trades, Combined	556	5	561	99.1 %	0.9 %
172305	Sheet Metal	84	0	84	100.0 %	0.0 %
172306	Welding & Cutting	1,066	24	1,090	97.8 %	2.2 %
172399	Jewelry Repair	4	20	24	16.7 %	83.3 %
172600	Personal Services	1	149	150	0.7 %	99.3 %
172602	Cosmetology	0	134	134	0.0 %	100.0 %
172700	Plastics Occupations	11	1	12	91.7 %	8.3 %
172800	Public Service Occupations	18	12	30	60.0 %	40.0 %
172900	Quantity Food Occupations	3	15	18	16.7 %	83.3 %
172902	Food Preparation Cooking	186	183	369	50.4 %	49.6 %
172904	Waiter/Waitress	5	64	69	7.2 %	92.8 %
172905	Related Instructor Food Services	2	12	14	14.3 %	85.7 %
173100	Small Engine Repair	1,455	48	1,503	96.8 %	3.2 %
173101	Recreational Vehicle Repair Occupatns	154	1	155	99.4 %	0.6 %
173200	Total Energy	67	4	71	94.4 %	5.6 %
173400	Leatherworking	11	0	11	100.0 %	0.0 %
173500	Upholstery	18	3	21	85.7 %	14.3 %
173600	Woodworking	1,096	230	1,326	82.7 %	17.3 %
173601	Millwork & Cabinetmaking	8	0	8	100.0 %	0.0 %
173699	Wood Finishing	. 5	. 2	7	71.4 %	28.6 %
179900	Other Trade & Industrial Occupations	1,618		2,135	75.8 %	24.2 %
173300 17XXXX	Unspecified	403	517	458	77.0 %	27.2 %
1/^^^	onspectified	COP	55	470	a	
TOTAL		22,808	3,620	26,428	86.3 %	13.7 %

## TABLE 3. ENROLLMENTS BY PROGRAM (CONT'D)

#### SPECIAL NEEDS

OE CODE	Course	Male	Female	Total	Percent Male	Percent Female
200063	Remedial Related Reading	69	33	102	67.6 %	32.4 %
200064	Remedial Related Math	20	6	26	76.9 %	23.1 %
200069	Pre-Vocational	9	3	12	75.0 %	25.0 %
200073	Work Experience - Career Exploration	347	213	560	62.0 %	38.0 %
200074	Work Experience - Disadvantaged	2,222	1,564	3,786	58.7 %	41.3 %
200075	Work Experience - Handicapped	596	480	1,076	55.4 %	44.6 %
200079	Technical Tutor	48	35	83	57.8 %	42.2 %
201000	General Special Needs	169	101	270	62.6 %	37.4 %
202000	Bilingual	7	5	12	58.3 %	41.7 %
20XXXX	Unspecified	175	122	297		
TOTAL		3,662	2,562	6,224	58.8 %	41.2 %

TABLE 4. STUDENTS IDENTIFIED AS EXCEPTIONAL, BY SEX AND RACE, 1980

Racial Group	Physica <u>Handica</u> Male	•	Economi Disadva Male		Limited Profici Male	
Macial Gloup		remare	riare	remare	<u>mare</u>	Fema le
Indian	42	38	246	236	16	1
Asian	13	7	41	43	106	122
Hispanic	27	23	57	51	13	15
Black	84	89	414	394	11	3
Minority Total	166	157	758	724	146	141
White	2,535	1,813	5,954	5,357	119	61

#### FEMALE ENROLLMENTS BY PROGRAM TYPE

		In Inte-		In Segregated Programs				
Curriculum Area	Total	grated Programs	Total	"Female" (Traditional)	"Male" (Non-Traditional)			
Agriculture	3,448	1,804	1,644		1,644			
Distributive Education	4,681	4,259	422	402	20			
Health Occupations	2,400	455	1,945	1,940	5			
Home Economics Occupations	39,217	24,253	14,964	14,964				
Office Occupations	21,348	10,269	11,079	11,079				
Technical Occupations	55	36	19		19			
Trade & Industrial	3,620	1,809	1,811	416	1,395			
TOTAL	74,769	42,885	31,884	28,801	3,083			

#### MALE ENROLLMENTS BY PROGRAM TYPE

		In Inte-		In Segregated Programs				
Curriculum Area	Total	grated Programs	Total	"Male" (Traditional)	"Female" (Non-Traditional)			
Agriculture	17,535	4,030	13,505	13,505				
Distributive Education	.3,319	3,093	226	167	59			
Health Occupations	921	212	709	599	110			
Home Economics Occupations	12,340	10,193	2,147		2,147			
Office Occupations	6,695	5,032	1,663		1,663			
Technical Occupations	736	54	682	682				
Trade & Industrial	22,808	3,578	19,230	19,215	15			
TOTAL	64,354	26,192	38,162	34,168	3,994			

ENROLLMENTS	BY	PROGRAM	TYPE -	ALL	STUDENTS

		In Inte-		In Segregated Programs					
Curriculum Area	Total	grated Programs	Total	Traditional Programs	Non-Traditional Programs				
Agriculture	20,983	5,834	15,149	13,505	1,644				
Distributive Education	8,000	7,352	648	569	79				
Health Occupations	3,321	667	2,654	2,539	115				
Home Economics Occupations	51,557	34,446	17,111	14,964	2,147				
Office Occupations	28,043	15,301	12,742	11,079	1,663				
Technical Occupations	791	90	701	682	19				
Trade & Industrial	26,428	5,387	21,041	19,631	1,410				
TOTAL	139,123	69,077	70,046	62,969	7,077				

TABLE 6. HOURLY WAGES OF VOCATIONAL GRADUATES,

CLASS OF 1979 ONE YEAR LATER

	Percen	t of Students	Who Took At	Least One Vo	cational Cour	se Earning:
Curriculum Area	Total	Below \$2	\$2 - \$2.99	\$3 - \$3.99	\$4 - \$4.99	Above \$4.99
Agriculture Male Graduates (864)* Female Graduates (396)*	100.0% 100.0%	2.4 % 2.0 %	2.8 % 8.3 %	27.4 % 59.6 %	30.3 % 23.5 %	37.1 % 6.6 %
Distributive Education Male Graduates (398) Female Graduates (653)	100.0%	0.5 % 1.4 %	2.5 % 5.2 %	30.4 % 53.9 %	30.4 % 31.4 %	36.2 % 8.1 %
Health Occupations Male Graduates (54) Female Graduates (324)	100.0%	3.7 % 1.2 %	1.9 % 8.0 %	35.2 % 57.1 %	25.9 % 28.1 %	33.3 % 5.6 %
Home Economics Occupations Male Graduates (1,590) Female Graduates (3,163)	100.0% 100.0%	1.4 %	2.2 % 7.3 %	30.5 % 54.9 %	27.3 % 27.8 %	38.6 % 8.7 %
Office Occupations Male Graduates (374) Female Graduates (1,611)	100.0% 100.0%	0.6 % 0.8 %	3.2 %, 6.6 %	32.6 % 50.8 %	27.8 % 32.1 %	35.8 % 9.7 %
Service Occupations Male Graduates (148) Female Graduates (286)	100.0% 100.0%	0.7 % 0.7 %	2.7 % 5.6 %	24.3 % 56.6 %	27.0 % 29.4 %	45.3 % 7.7 %
Technical Occupations Male Graduates (190) Female Graduates (73)	100.0%	1.6 %	3.2 %	42.1 % 65.8 %	26.3 % 16.4 %	26.8 % 6.8 %
Trade & Industrial Male Graduates (1,039) Female Graduates (212)	100.0%	0.8 %	2.1 % 5.2 %	24.8 % 46.7 %	30.7 % 35.4 %	41.6 % 11.8 %

<sup>\*</sup> Numbers in parentheses indicate number of graduates reporting wages in the sample survey.

TABLE 7. VOCATIONAL STAFF BY CURRICULUM AREA, 1980

	Full	Time	Part	Time	Tot	al	Percent	Percent
	<u>Male</u>	<u>Female</u>	Male	<u>Female</u>	Male	Female	Male	Female
TEACHERS:								
Agriculture	197	19	40	0	237	19	92.6 %	7.4 %
Distributive Education	68	15	7	6	75	21	78.1 %	21.9 %
Health Occupations	15	64	3	15	18	79	18.6 %	81.4 %
Occup. Home Economics	3	120	0	34	3	154	1.9 %	98.1 %
Office Occupations	96	157	35	43	131	200	0.7 %	99.3 %
Technical Occupations	69.	2	10	2	79	4	95.2 %	4.8 %
Trades & Industrial	314	5	72	2	386	7	98.2 %	1.8 %
Consumer Homemaking (voc)	0	223	0	78	0	301	0.0 %	100.0 %
Other, not classified (voc)	115	41	21	6	136	47	74.3 %	25.7 %
TOTAL TEACHERS	877	646	188	186	1,065	832	56.1 %	43.9 %
PROGRAM SUPPORT	33	23	4	8	37	31	54.4 %	45.6 %
ADMINISTRATORS/SUPERVISORS	57	9	12	1	69	10	87.4 %	12.6 %

## **Definitions**

Enrollment. In this report, enrollment figures other than those for individual courses may represent a duplicated count of students, since some students may be enrolled in more than one vocational course at a time. All enrollment data in this report is statewide.

Curriculum Area or Program Area. These terms refer to groupings of programs into eight areas: Agriculture, Distributive Education, Health Occupations, Home Economics (including both Consumer Homemaking, 0901XX, and Occupational Home Economics, 0902XX), Office Occupations, Technical Occupations, Trade & Industrial, and Special Needs. Followup data contains an additional curriculum area, Service Occupations.

Racial Minorities. Minority student data reported by school districts to the Minnesota Civil Rights Information System does not denote scientific definitions of anthropological origins. No person is counted in more than one racial/ethnic category. Minorities identified by this system are: American Indian or Alaskan Native; Asian or Pacific Islander; Hispanic, referring to country of origin or culture, not race; Black, not of Hispanic origin; and White, not of Hispanic origin.

Course or Program. These terms refer to individual course offerings within curriculum areas. All course or program data in this report represent statewide enrollments by subject or grade level, not by individual school district.

Exceptional Students. These figures refer to students identified as belonging to one or more of three special categories: physically handicapped; limited English proficiency, meaning students who do not speak and understand English well enough to benefit from vocational studies to the same extent as students whose primary language is English; and economically disadvantaged, referring to students who are participating in a free or reduced lunch program, Aid to Families with Dependent Children program, or work-study program. Exceptional students may or may not be enrolled in a Special Needs program.

<u>Segregated</u>. A segregated program or course is one in which more than 80 percent of the students are of one sex. A segregated 'male' program has enrollments which are more than 80 percent male, while a segregated 'female' program has enrollments which are more than 80 percent female.

Integrated. All programs which are not segregated by sex are considered integrated.

Traditional. Students enrolled in programs where the total enrollment exceeds 80 percent of their own sex are defined as traditional students.

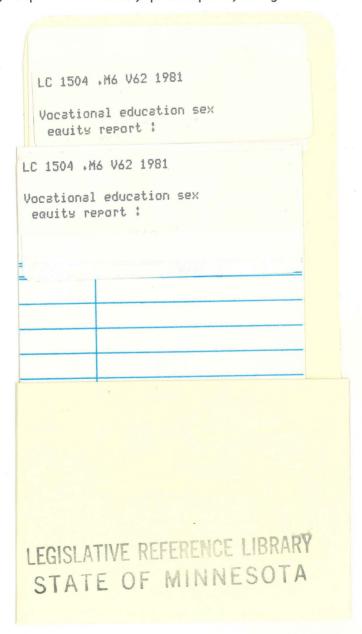
Non-Traditional. Students enrolled in segregated programs dominated by students of the other sex are defined as non-traditional students.

## **Definitions, continued**

<u>Vocational Teachers</u>. Vocational teachers are staff members assigned the professional activities of instructing pupils in vocationally reimbursed programs. In this report, this term refers to teachers in secondary cooperative vocational centers as well as high school vocational teachers.

<u>Program Support Services Staff.</u> This refers to individuals employed for the primary purpose of assuring that students benefit from their vocational education programs, such as teacher aides, remedial teachers, and interpreters for deaf students.

<u>Vocational Administrators and Supervisors</u>. This refers to professional staff other than teachers and support services staff who are assigned to the supervision of vocational education programs. This does not include general administrative staff, superintendents, principals, or guidance counselors.



# **Vocational Education Sex Equity Report Secondary 1981**

Prepared for the Minnesota Department of Education under Contract No. 6-SB-MN/81 by:

COUNCIL ON THE ECONOMIC STATUS OF WOMEN 400 SW, State Office Building Saint Paul, Minnesota 55155

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