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ABSTRACT

The document includes tables and graphs to show trends in enrollments, expenditures, and teachers in vocational education for the United States and outlying areas. It covers fiscal years 1970-72 with other selected fiscal years for comparison. The projected data are for fiscal 1977. The statistics were derived from annual reports by the Division of Vocational and Technical Education and data compiled by the Reports and Data Unit from State annual reports and plan projections. The data show that enrollments and expenditures have increased, the quality and scope of vocational programs have improved, new facilities and equipment have been provided, curriculums have been updated, and improvements in the reporting system are being developed. (Author/AG)

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ED 085542

Vocational Education Information No. II

TRENDS
IN
VOCATIONAL EDUCATION
FISCAL YEAR 1972

enrollments

expenditures

teachers

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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FOREWORD

This document, the second in the "Vocational Education Information" series for fiscal year 1972, includes tables and graphs to show trends in enrollments (Section I), expenditures (Section II), and teachers (Section III) for the United States and outlying areas.

Statistical information was derived from annual reports published by the Division of Vocational and Technical Education and unpublished data compiled by the Reports and Data Unit from State annual reports and State plan projections. Generally the actual data, showing trends, cover fiscal years 1970-72 with other selected fiscal years for comparison and the projected data are for fiscal year 1977.

Several changes have been made in the vocational education reporting system to reflect new priorities in legislation. Consequently, compatible data are not available in a few instances. In others, adjustments have been made so that data are compatible and are explained in the text or in the tables.

The tables and graphs show that vocational education has experienced significant growth, particularly after the Vocational Education Act of 1963. The full impact of the Vocational Education Amendments of 1968 was not apparent until fiscal year 1971, since funds first became available late in the 1970 fiscal year. In addition to expansion in enrollments and increased expenditures, positive changes have occurred in the quality and scope of vocational programs. New facilities and equipment have been provided, curriculums have been updated, and improvements in the reporting system are developing.

This information on trends should be useful to all persons interested in the nature and scope of vocational education in the United States, and particularly to those individuals involved in program administration.

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Acting Director
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and Technical Education

June 1973

SECTION I. VOCATIONAL EDUCATION ENROLLMENTS

Figures 1 and 2 picture the growth of vocational enrollments for selected periods. Figure 1 traces enrollment trends from 1918 to 1972, showing the influence of major legislation on enrollment growth. Within the 54-year period, enrollments grew from 164,168 to over 11.5 million. Figure 2 charts the year-to-year changes in enrollments from 1965 through 1972. Large yearly increases in total enrollment occurred in 1965, 1967, and again in 1971; secondary enrollment in 1965, 1970, and 1971; post-secondary enrollment in 1966 and 1970; and adult enrollment in 1967. Yearly gains in total enrollment after 1965 were about 500,000 except for increases of about 1 million in 1967, 1970, and 1972 and 1.7 million in 1971.

Table 1 shows that total vocational education enrollments increased from 8,793,960 in 1970 to 11,602,144 in 1972. The largest percentage increase for any one year was in 1971 when the increase was 19.4 percent.

Table 1 shows that the largest percent of the vocational enrollees are in secondary programs, a proportion which increased from 51.9 percent in 1965 to 62.3 percent in 1972. Postsecondary enrollment, only 3.8 percent of the 1965 enrollment, passed the 1-million mark in 1970 and made up 11.5 percent of that year's total, which proportion decreased slightly in 1971 and 1972. Conversely, adult enrollment dropped from 43.8 percent of the 1965 enrollment to 26.4 percent in 1972 and the 1977 projection forecasts a declining trend to 24.1 percent.

The first year for reporting services to persons with special needs was 1965, during which 25,638 of these persons were enrolled. After that year, and until 1970, enrollment data reported (1) those in separate classes and (2) those who received special services in regular classes. The 1968 Amendments changed this breakdown by stipulating programs specifically for the disadvantaged and for the handicapped. Thus, Table 1 shows inclusion of disadvantaged and handicapped persons in the enrollment levels and totals for 1970-1972.

Table 2 compares secondary vocational enrollment to the total secondary enrollment (grades 9-12 only). Vocational enrollment increased more rapidly than the total secondary enrollment, from 35.5 percent to 39.9 percent. Enrollment in vocational programs which prepare for gainful employment increased from 22.4 percent to 26.5 percent. Enrollment projections shows that in 1977 over half (55.7 percent) of the Nation's secondary school population will be enrolled in vocational education.

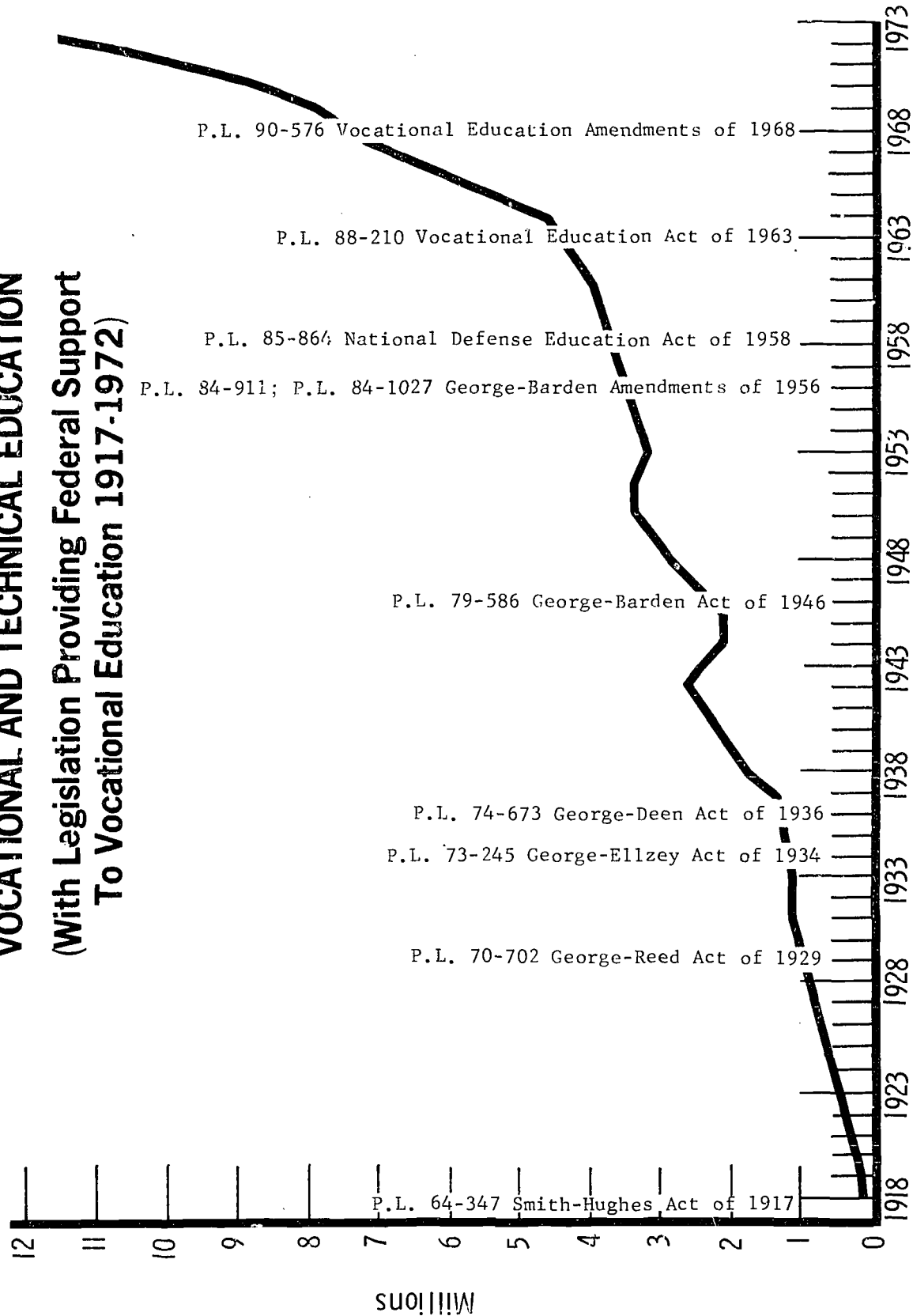
Table 3 shows the percentage distribution of male and female enrollees by level and by program for the years data are available. The proportion of female enrollees remains rather constant at about 55.5 percent. By level, however, females accounted for almost two-thirds of the secondary enrollment in 1970. Male enrollees at the postsecondary level constitute over 60 percent of the total and about 54 percent at the adult level. A look at enrollment distribution by sex in the several vocational programs reveals an increasing number of females in agriculture, distribution, office, technical, and trades and industry while an increasing number of males are enrolling in health and home economics.

Enrollments by OE instructional programs, as shown in Table 4, reveal some rather interesting trends over the period 1970-1972. The decline in agricultural production programs was largely offset by increases in the off-farm occupational programs in agricultural mechanics, ornamental horticulture, agricultural resources, and forestry.

The ten programs with the largest enrollment (over 81,000) in 1966 were agricultural production, stenographic and secretarial, filing and office machines, typing and related, accounting and computing, metalworking, fireman training, auto mechanics, general merchandise, and electrical occupations. All but electrical occupations remained in the top ten in 1972, being replaced by business data processing.

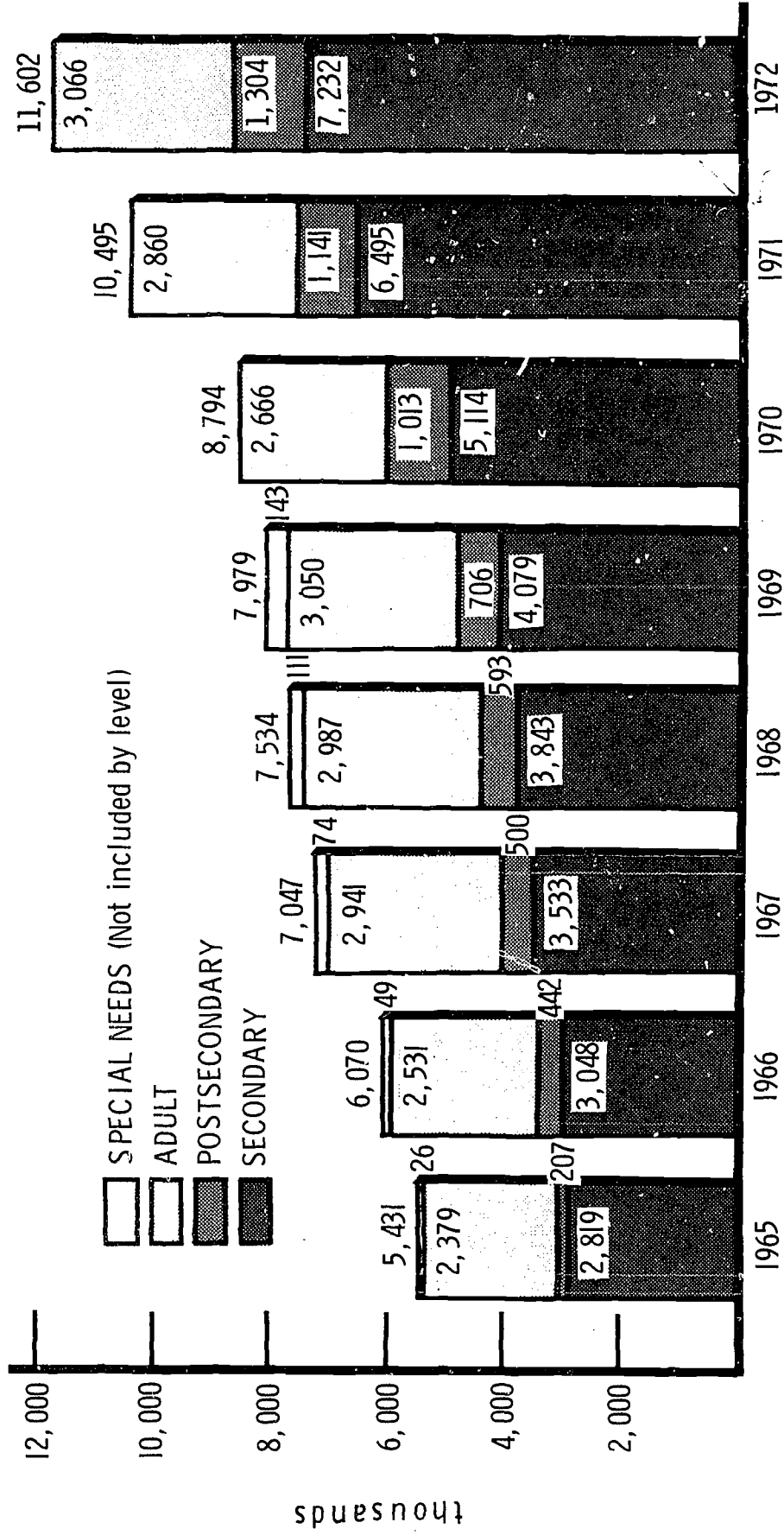
The largest percentage increases in programs from 1970 to 1972 were in floristry, hardware, recreation and tourism, associate degree nurse, occupational therapy assistant, radiologic, health aide, care and guidance of children, electromechanical technology, environmental control technology, police science technology, auto body and fender, metallurgical occupations, plastics occupations, small engine repair, upholstery, prevocational, and remedial. The following programs decreased significantly in enrollment: agricultural production, agricultural products, forestry, food distribution, hotel and lodging, materials support, scientific data processing, commercial pilot training, blueprint reading, and stationary energy sources occupations.

**Figure 1. TOTAL ENROLLMENTS
VOCATIONAL AND TECHNICAL EDUCATION
(With Legislation Providing Federal Support
To Vocational Education 1917-1972)**



SOURCE: Annual Reports, Division of Vocational and Technical Education, 1918-1972, and unpublished Division data.

Figure 2. TOTAL ENROLLMENTS IN VOCATIONAL EDUCATION 1965-1972
(In Thousands)



SOURCE: Annual Reports, Division of Vocational and Technical Education, 1965-1972, and unpublished Division data.

Table 1. ENROLLMENTS IN VOCATIONAL EDUCATION, BY LEVEL AND TARGET GROUP
FISCAL YEARS 1970-1977

| | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1977</u> <u>(Projected)</u> |
|---|-------------|-------------|-------------|-----------------------------------|
| Number | | | | |
| Total | 8,793,960 | 10,495,411 | 11,602,144 | 17,294,000 |
| Secondary | 5,114,451 | 6,494,641 | 7,231,648 | 10,416,000 |
| Postsecondary | 1,013,426 | 1,140,943 | 1,304,092 | 2,710,000 |
| Adult | 2,666,083 | 2,859,827 | 3,066,404 | 4,168,000 |
| Disadvantaged | (805,384) | (1,414,437) | (1,616,621) | (2,322,000) |
| Handicapped | (115,219) | (208,781) | (221,342) | (380,000) |
| Percentage Distribution | | | | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Secondary | 58.2 | 61.9 | 62.3 | 60.2 |
| Postsecondary | 11.5 | 10.9 | 11.2 | 15.7 |
| Adult | 30.3 | 27.2 | 26.4 | 24.1 |
| Disadvantaged | (9.2) | (13.5) | (13.9) | (13.4) |
| Handicapped | (1.3) | (2.0) | (1.9) | (2.2) |
| Percentage Change From Previous Year | | | | |
| Total | 10.2 | 19.4 | 10.5 | --- |
| Secondary | 25.4 | 26.9 | 11.3 | --- |
| Postsecondary | 43.5 | 12.6 | 14.3 | --- |
| Adult | -12.5 | 7.2 | 7.2 | --- |
| Disadvantaged | 220.5 | 75.6 | 14.3 | --- |
| Handicapped | | 81.1 | 6.1 | --- |

Table 2. SECONDARY ENROLLMENT IN VOCATIONAL EDUCATION (GRADES 9-12)
FISCAL YEARS 1970-1977

| | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1977</u> (Projected) |
|--|--------------------------|--------------------------|--------------------------|----------------------------|
| Total Secondary Enrollment | 13,282,000 ^{1/} | 13,597,000 ^{1/} | 14,100,000 ^{2/} | 14,600,000 ^{2/} |
| Vocational Education Enrollment | 4,714,451 | 5,111,273 | 5,622,777 | 8,125,000 |
| Percentage in Vocational Education | 35.5 | 37.6 | 39.9 | 55.7 |
| Vocational Education Enrollment (Less Homemaking) | 2,979,629 | 3,305,856 | 3,732,835 | 5,850,000 |
| Percentage in Vocational Education | 22.4 | 24.3 | 26.5 | 40.1 |

^{1/} U.S. Office of Education, National Center for Educational Statistics. Digest of Educational Statistics (OE 72-45), Table 28. Washington: U.S. Government Printing Office.

^{2/} U.S. Office of Education, National Center for Educational Statistics. Projections of Educational Statistics to 1980-81 (OE 72-99), Table 3. Washington: U.S. Government Printing Office.

Table 3. PERCENTAGE DISTRIBUTION OF ENROLLMENT IN VOCATIONAL
EDUCATION PROGRAMS, BY SEX
FISCAL YEARS 1970-1977

| | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1977</u> <u>(Projected)</u> |
|---------------------|-------------|-------------|-------------|-----------------------------------|
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| By Level | | | | |
| All Programs | | | | |
| Male | 45.0 | 44.3 | 44.6 | 43.0 |
| Female | 55.0 | 55.7 | 55.4 | 57.0 |
| Secondary | | | | |
| Male | 37.4 | -- | -- | 36.0 |
| Female | 62.6 | -- | -- | 64.0 |
| Postsecondary | | | | |
| Male | 60.7 | -- | -- | 60.0 |
| Female | 39.3 | -- | -- | 40.0 |
| Adult | | | | |
| Male | 53.9 | -- | -- | 52.0 |
| Female | 46.1 | -- | -- | 48.0 |
| By Program | | | | |
| Agriculture | | | | |
| Male | -- | 95.9 | 94.6 | 92.0 |
| Female | -- | 4.1 | 5.4 | 8.0 |
| Distribution | | | | |
| Male | -- | 55.3 | 54.7 | 54.0 |
| Female | -- | 44.7 | 45.3 | 46.0 |
| Health | | | | |
| Male | -- | 12.3 | 15.3 | 17.0 |
| Female | -- | 87.7 | 84.7 | 83.0 |
| Home Economics | | | | |
| Male | -- | 7.2 | 8.4 | 10.0 |
| Female | -- | 92.8 | 91.6 | 90.0 |
| Office | | | | |
| Male | -- | 24.5 | 23.6 | 25.0 |
| Female | -- | 75.5 | 76.4 | 75.0 |
| Technical | | | | |
| Male | -- | 92.3 | 90.2 | 91.0 |
| Female | -- | 7.7 | 9.8 | 9.0 |
| Trades and Industry | | | | |
| Male | -- | 89.1 | 88.3 | 87.0 |
| Female | -- | 10.9 | 11.7 | 13.0 |

Table 4. ENROLLMENT IN VOCATIONAL EDUCATION BY OE INSTRUCTIONAL PROGRAMS
FISCAL YEARS 1970-1977

| <u>OE Instructional Program</u> | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1977</u> (Projected) |
|------------------------------------|-------------|-------------|-------------|----------------------------|
| Agricultural Production | 584,757 | 557,633 | 564,155 | 513,000 |
| Agricultural Supplies | 21,522 | 20,583 | 24,237 | 31,000 |
| Agricultural Mechanics | 104,749 | 120,745 | 128,795 | 189,000 |
| Agricultural Products | 12,111 | 9,235 | 9,439 | 10,000 |
| Ornamental Horticulture | 47,259 | 48,267 | 56,329 | 80,000 |
| Agricultural Resources | 17,167 | 20,000 | 24,440 | 43,000 |
| Forestry | 19,681 | 16,675 | 17,998 | 20,000 |
| Other Agriculture * | 45,737 | 53,289 | 71,070 | 14,000 |
| Advertising Services | 14,402 | 26,748 | 17,535 | 25,000 |
| Apparel and Accessories | 21,222 | 20,569 | 24,798 | 34,000 |
| Automotive | 6,766 | 7,231 | 9,640 | 17,000 |
| Finance and Credit | 20,259 | 23,543 | 27,996 | 47,000 |
| Floristry | 2,274 | 3,708 | 5,231 | 13,000 |
| Food Distribution | 37,556 | 25,101 | 29,061 | 35,000 |
| Food Services | 29,229 | 28,168 | 34,149 | 46,000 |
| General Merchandise | 132,712 | 199,728 | 204,681 | 385,000 |
| Hardware, Building Materials, Etc. | 2,383 | 5,540 | 5,725 | 14,000 |
| Home Furnishings | 3,255 | 4,734 | 5,874 | 12,000 |
| Hotel and Lodging | 16,457 | 13,098 | 12,697 | 10,000 |
| Industrial Marketing | 7,080 | 8,141 | 8,627 | 12,000 |
| Insurance | 13,536 | 14,226 | 13,132 | 14,000 |
| International Trade | 347 | 1,549 | 702 | 1,000 |
| Petroleum | 4,897 | 5,087 | 4,280 | 5,000 |
| Personal Services | 15,466 | 13,461 | 17,836 | 24,000 |
| Real-Estate | 50,936 | 73,018 | 82,111 | 160,000 |
| Recreation and Tourism | 3,202 | 10,431 | 12,782 | 37,000 |
| Transportation | 11,714 | 12,794 | 12,447 | 14,000 |
| Other Distribution * | 135,672 | 81,762 | 111,119 | 15,000 |

* See footnote at end of table.

Table 4. ENROLLMENT IN VOCATIONAL EDUCATION BY OE INSTRUCTIONAL PROGRAMS (Cont'd)

| <u>OE Instructional Program</u> | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1977</u> (Projected) |
|--|-------------|-------------|-------------|----------------------------|
| Dental Assisting | 8,291 | 12,189 | 15,466 | 33,000 |
| Dental Hygiene | 2,845 | 3,828 | 4,754 | 10,000 |
| Dental Laboratory Technology | 2,052 | 2,581 | 2,948 | 7,000 |
| Medical Laboratory Technology | 9,585 | 5,650 | 10,524 | 13,000 |
| Other Medical Lab. Technology | --- | 7,798 | 3,156 | 5,000 |
| Nursing, Associate Degree | 26,884 | 47,090 | 64,931 | 75,000 |
| Practical Nursing | 57,465 | 73,372 | 82,896 | 100,000 |
| Nursing Assistant (Aide) | 51,502 | 54,868 | 58,903 | 110,000 |
| Occupational Therapy | 458 | 686 | 1,504 | 4,000 |
| Physical Therapy | --- | 1,200 | 1,501 | 3,000 |
| Radiologic Technology | 2,316 | 4,868 | 5,766 | 14,000 |
| Environmental Health | --- | 2,998 | 1,401 | 3,000 |
| Mental Health Technology | --- | 2,380 | 3,898 | 10,000 |
| Inhalation Therapy | 2,981 | 3,767 | 5,759 | 13,000 |
| Medical Assistant | 3,831 | 7,549 | 10,326 | 27,000 |
| Health Aide | --- | 2,282 | 8,438 | 39,000 |
| Other Health Occupations * | 29,833 | 38,112 | 54,724 | 98,000 |
| Care and Guidance of Children | 27,775 | 49,338 | 77,158 | 200,000 |
| Clothing Management | 36,060 | 39,426 | 59,524 | 118,000 |
| Food Management and Production | 51,242 | 67,077 | 77,594 | 143,000 |
| Home Furnishings, Equipment, & Services | 9,849 | 11,433 | 21,278 | 50,000 |
| Institutional and Home Management | 7,274 | 6,701 | 8,061 | 10,000 |
| Other Occupational Preparation * | 18,994 | 23,617 | 36,648 | 8,000 |
| Accounting and Computing | 301,353 | 329,281 | 351,861 | 478,000 |
| Business Data Processing Systems | 165,977 | 181,313 | 156,748 | 160,000 |
| Filing, Office Machines, Clerical | 381,875 | 364,274 | 398,226 | 439,000 |
| Information Communication | 23,572 | 26,788 | 23,826 | 25,000 |
| Materials Support, Transporting, Storing, and Recording | 12,441 | 11,860 | 10,288 | 10,000 |
| Personnel, Training, and Related | 9,268 | 11,924 | 13,693 | 25,000 |

* See footnote at end of table.

Table 4. ENROLLMENT IN VOCATIONAL EDUCATION BY OE INSTRUCTIONAL PROGRAMS (Cont'd)

| <u>OE Instructional Program</u> | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1977</u> |
|----------------------------------|-------------|-------------|-------------|-------------|
| | | | | (Projected) |
| Stenographic, Secretarial | 470,030 | 533,221 | 550,686 | 752,000 |
| Supervisory & Administrative | 50,895 | 70,050 | 77,730 | 145,000 |
| Typing and Related | 555,357 | 612,770 | 628,414 | 811,000 |
| Other Office Occupations * | 140,392 | 88,212 | 141,300 | 55,000 |
| Aeronautical Technology | 4,339 | 6,095 | 5,888 | 10,000 |
| Architectural Technology | 8,128 | 14,716 | 14,144 | 29,000 |
| Automotive Technology | 4,507 | 5,021 | 7,453 | 15,000 |
| Chemical Technology | 3,267 | 6,393 | 5,355 | 11,000 |
| Civil Technology | 12,346 | 19,216 | 20,113 | 40,000 |
| Electrical Technology | 11,765 | 19,355 | 15,742 | 26,000 |
| Electronics Technology | 57,520 | 67,335 | 64,440 | 82,000 |
| Electromechanical Technology | 1,877 | 4,829 | 4,463 | 11,000 |
| Environmental Control Technology | 2,035 | 2,956 | 4,634 | 11,000 |
| Industrial Technology | 9,345 | 9,457 | 11,706 | 18,000 |
| Instrumentation Technology | 2,294 | 4,089 | 3,084 | 5,000 |
| Mechanical Technology | 27,976 | 25,249 | 26,395 | 30,000 |
| Metallurgical Technology | 2,162 | 2,779 | 1,742 | 2,000 |
| Scientific Data Processing | 18,162 | 15,949 | 16,948 | 20,000 |
| Commercial Pilot Training | 7,264 | 7,381 | 5,884 | 10,000 |
| Fire and Safety Technology | 4,470 | 8,377 | 8,826 | 20,000 |
| Forestry Technology | --- | 2,298 | 2,504 | 4,000 |
| Oceanographic Technology | 1,002 | 1,664 | 1,872 | 4,000 |
| Police Science Technology | 18,796 | 36,099 | 43,863 | 107,000 |
| Air Pollution Technology | --- | 356 | 1,173 | 5,000 |
| Water & Waste Water Technology | 169 | 802 | 1,483 | 5,000 |
| Other Technical Education * | 74,306 | 53,482 | 69,493 | 10,000 |
| Air Conditioning | 28,391 | 52,575 | 67,620 | 166,000 |
| Appliance Repair | 8,971 | 9,474 | 17,472 | 39,000 |
| Body and Fender, Auto | 24,458 | 39,703 | 57,284 | 139,000 |
| Mechanics | 131,475 | 176,203 | 228,364 | 470,000 |
| Other Automotive | 60,961 | 52,215 | 39,522 | 40,000 |

* See footnote at end of table.

Table 4. ENROLLMENT IN VOCATIONAL EDUCATION BY OE INSTRUCTIONAL PROGRAMS (Cont'd)

| <u>OE Instructional Program</u> | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1977</u> (Projected) |
|------------------------------------|-------------|-------------|-------------|----------------------------|
| Aviation Occupations | 32,641 | 33,804 | 31,780 | 35,000 |
| Blueprint Reading | 15,446 | 13,694 | 12,842 | 6,000 |
| Business Machine Maintenance | 2,319 | 2,854 | 3,326 | 6,000 |
| Commercial Art Occupations | 20,971 | 23,983 | 31,445 | 58,000 |
| Commercial Fishery Occupations | 2,784 | 3,885 | 3,203 | 5,000 |
| Commercial Photography Occup. | 11,176 | 13,570 | 14,612 | 23,000 |
| Carpentry | 56,621 | 79,988 | 95,706 | 193,000 |
| Electricity | 47,765 | 53,120 | 60,791 | 93,000 |
| Masonry | 21,863 | 26,682 | 29,992 | 50,000 |
| Plumbing and Pipefitting | 27,821 | 35,420 | 37,311 | 61,000 |
| Other Construction & Maint. | 86,806 | 70,813 | 79,623 | 80,000 |
| Custodial Services | 14,567 | 16,292 | 16,267 | 21,000 |
| Diesel Mechanic | 8,680 | 9,568 | 13,611 | 26,000 |
| Drafting Occupations | 112,405 | 134,790 | 126,750 | 163,000 |
| Electrical Occupations | 61,849 | 57,865 | 81,493 | 131,000 |
| Electronics Occupations | 78,710 | 95,118 | 97,936 | 146,000 |
| Fabric Maintenance Services | 7,159 | 3,859 | 5,939 | 8,000 |
| Foremanship, Super., & Mgt. Devel. | 74,509 | 88,914 | 120,820 | 237,000 |
| Graphic Arts Occupations | 53,738 | 68,343 | 68,562 | 106,000 |
| Industrial Atomic Energy | 511 | 492 | 157 | 500 |
| Instrument Maint. & Repair | 3,078 | 2,616 | 3,045 | 5,500 |
| Maritime Occupations | 4,452 | 4,693 | 6,755 | 13,000 |
| Metalworking Occupations | 242,074 | 274,744 | 291,662 | 416,000 |
| Metallurgy Occupations | 1,407 | 3,367 | 5,160 | 15,000 |
| Barbering | 5,280 | 4,031 | 3,974 | 5,000 |
| Cosmetology | 37,395 | 45,045 | 48,810 | 77,000 |
| Other Personal Services | 17,905 | 15,985 | 13,356 | 10,000 |
| Plastics Occupations | 2,398 | 4,313 | 5,116 | 12,000 |
| Fireman Training | 99,294 | 128,822 | 159,307 | 309,000 |
| Law Enforcement Training | 47,931 | 65,021 | 74,801 | 142,000 |
| Other Public Services | 76,096 | 49,733 | 58,571 | 15,000 |

Table 4. ENROLLMENT IN VOCATIONAL EDUCATION BY OE INSTRUCTIONAL PROGRAMS (Cont'd)

| <u>OE Instructional Program</u> | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1977</u> (Projected) |
|--|-------------|-------------|-------------|----------------------------|
| Quantity Food Occupations | 23,053 | 37,253 | 37,459 | 73,000 |
| Refrigeration | 7,839 | 10,036 | 11,198 | 20,000 |
| Small Engine Repair | 13,028 | 19,182 | 26,045 | 59,000 |
| Sta. Energy Sources Occupations | 10,158 | 7,863 | 7,502 | 10,000 |
| Textile Production & Fabrication | 40,769 | 43,753 | 51,238 | 77,000 |
| Leather Working | 1,933 | 2,268 | 2,756 | 5,000 |
| Upholstering | 7,282 | 11,630 | 16,549 | 40,000 |
| Woodworking Occupations | 50,888 | 53,593 | 84,709 | 169,000 |
| Other Trade and Industrial Education * | 221,417 | 128,606 | 146,421 | 74,000 |
| <u>Special Programs</u> | | | | |
| Consumer and Homemaking | 2,419,216 | 2,932,382 | 3,165,732 | 3,990,000 |
| Prevocational Remedial | 586,046 | 859,931 | 1,079,752 | 2,314,000 |
| | 27,240 | 57,554 | 57,879 | 134,000 |
| Cooperative - Total | 290,781 | 379,840 | 459,614 | 800,000 |
| Part G | (23,001) | (70,469) | (118,924) | (204,000) |
| Work-Study | 15,522 | 28,726 | 30,896 | 45,000 |

* Other new and emerging occupations and cluster programs

SECTION II. EXPENDITURES FOR VOCATIONAL EDUCATION

As shown in Figure 3 and Table 5, the funds available for vocational and technical education increased significantly. Federal allotments rose from \$57 million in 1964 to \$472 million in 1972.

Table 5 showing total expenditures by source of funds reveals that State and local expenditures greatly overmatch the Federal dollar. State and local expenditures accounted for more than 80 percent of the total expenditures.

It should be noted that the Federal funds expended in 1970 were considerably less than the allotment because the appropriation was not available until late in the fiscal year. The funds in the amount of \$65 million, however, were carried forward by the States for expenditure in 1971. Again in 1971 and 1972 States carried forward for expenditure in the succeeding year a considerable portion of their allotments.

Figure 3 shows graphically the increase in total expenditures from 1965 through 1972, including the actual totals spent by source.

Table 6 shows expenditures and percentage distribution by function. The 1968 Amendments provided more flexibility in funding which resulted in the rearrangement of several categories. The proportion for instruction, having declined from 1965 to 1970, now constitutes about two-thirds of the total expenditures. Expenditures for administration and instructional equipment rank next, with 8.0 percent and 6.1 percent respectively. Other instructional costs, reported separately, included student transportation, space rental, insurance, teacher travel, and utilities.

Table 7 shows the allocation of Federal funds expended for the various purposes outlined in the 1963 Act, as amended. Of significance is the percentage increase in expenditures for secondary programs. Other purposes showing increasing percentages of the total are adult, disadvantaged, ancillary services, and guidance and counseling. Postsecondary expenditures remain rather stable at about 22 percent, which is well above the 15 percent required by the legislation. Similarly, expenditures for the disadvantaged exceed the 15-percent minimum but to a lesser degree. Expenditures for the handicapped are only slightly above the 10-percent minimum. Expenditures for construction of area vocational schools continues at about 15 percent. Only a small amount of funds are expended under the contracting provision. Reporting was changed in 1971 to allocate expenditures for ancillary services and guidance and counseling by level and accounts for some of the increase in proportion of the total being spent by level of education.

Table 8 indicates total expenditures for all programs allocated to a level of education. In 1972, 66.0 percent of the expenditures were secondary, 26.6 percent postsecondary, and 7.4 percent adult compared to 62.9, 30.8, and 6.3 respectively in 1970. It can be noted that prior to 1972 the ratio of Federal funds to State and local funds was somewhat higher for postsecondary than the other levels but in 1972 due to a decrease in State and local funds, 22 percent of the funds for adults came from Federal sources compared with 17 percent at the other two levels.

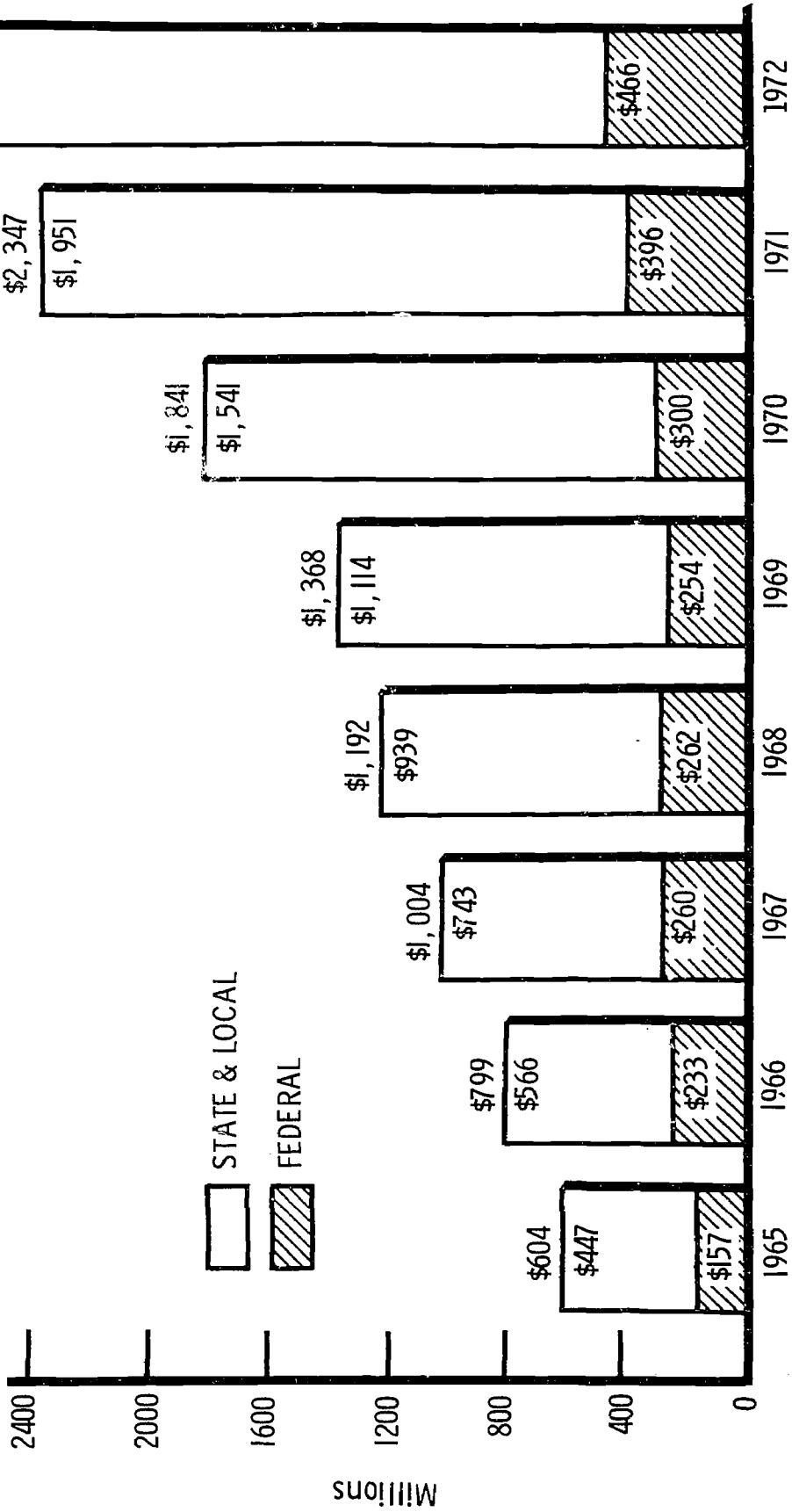
Table 9 shows total expenditures for all programs allocated by target population and by level. In 1972, 10.9 percent of the expenditures were for the disadvantaged, having increased from 7.7 percent in 1970; and 2.6 percent was for the handicapped, about the same percent as in 1970. The most significant change from 1970 to 1971 was the increase in funds for adult level programs, especially for the disadvantaged and handicapped. However, in 1972 there was a decrease in funds for adults for each target group.

Table 5. TOTAL EXPENDITURES FOR VOCATIONAL EDUCATION, BY SOURCE OF FUNDS
FISCAL YEARS 1970-1977

| | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1977</u> (Projected) |
|--------------------------------------|--------------------------------------|-----------------|-----------------|----------------------------|
| | Amount | | | |
| Grand Total | \$1,841,846,345 | \$2,347,353,175 | \$2,660,758,658 | \$4,950,000,000 |
| Federal | 300,045,568 | 396,378,405 | 466,029,820 | 825,000,000 |
| State/Local | 1,541,800,777 | 1,950,974,770 | 2,194,728,838 | 4,125,000,000 |
| Ratio: State/Local to Federal | \$5.14 | \$4.92 | \$4.71 | \$5.00 |
| | Percentage Distribution | | | |
| Grand Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Federal | 16.3 | 16.9 | 17.5 | 16.7 |
| State/Local | 83.7 | 83.1 | 82.5 | 83.3 |
| | Percentage Change from Previous Year | | | |
| Grand Total | 34.6 | 27.4 | 13.4 | --- |
| Federal | 17.8 | 32.1 | 17.6 | --- |
| State/Local | 38.4 | 26.5 | 12.5 | --- |
| | Federal Allotment | | | |
| Total Allotment (1968 Amendments) | \$365,347,467 | \$412,812,093 | \$471,968,455 | |

**Figure 3. EXPENDITURES FOR VOCATIONAL EDUCATION, BY SOURCE OF FUNDS
1965-1972**

(In Millions)



SOURCE: Annual Reports, Division of Vocational and Technical Education, 1965-1972.

Table 6. TOTAL EXPENDITURES FOR VOCATIONAL EDUCATION, BY FUNCTION*
 FISCAL YEARS 1970-1977
 (In Thousands)

| | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1977</u> <u>(Projected)</u> |
|------------------------------|--------------------------------|-------------|-------------|-----------------------------------|
| | <u>Amount</u> | | | |
| Total | \$1,654,603 | \$2,075,881 | \$2,410,086 | \$4,600,000 |
| Administration & Supervision | 112,924 | 142,813 | 193,900 | 322,000 |
| Teacher Education | 33,095 | 26,879 | 31,065 | 69,000 |
| Instructional Salaries | 1,006,777 | 1,426,330 | 1,585,709 | 3,036,000 |
| Research | 4,411 | 12,260 | 18,462 | 41,400 |
| Instructional Equipment | 202,064 | 141,401 | 147,908 | 322,000 |
| Vocational Guidance | 57,299 | 66,609 | 89,778 | 161,000 |
| Curriculum Development | 2,932 | 8,475 | 9,300 | 18,400 |
| Other Instructional Costs | 235,100 | 251,114 | 333,964 | 630,200 |
| | <u>Percentage Distribution</u> | | | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Administration & Supervision | 6.8 | 6.8 | 8.0 | 7.0 |
| Teacher Education | 2.0 | 1.3 | 1.3 | 1.5 |
| Instructional Salaries | 60.8 | 68.7 | 65.8 | 66.0 |
| Research | 0.3 | 0.7 | 0.8 | 0.9 |
| Instructional Equipment | 12.2 | 6.8 | 6.1 | 7.0 |
| Vocational Guidance | 3.5 | 3.2 | 3.7 | 3.5 |
| Curriculum Development | 0.2 | 0.4 | 0.4 | 0.4 |
| Other Instructional Costs | 14.2 | 12.1 | 13.9 | 13.7 |

* Excludes construction and work-study.

Table 7. EXPENDITURES FROM VOCATIONAL EDUCATION ACT OF 1963, AS AMENDED, BY PURPOSE
FISCAL YEARS 1970-1972

| | 1970 | | 1971 | | 1972 | |
|------------------------|---------------------------|------------------|----------------------------|------------------|----------------------------|------------------|
| | Amount | Percent of Total | Amount | Percent of Total | Amount | Percent of Total |
| Total | \$265,811,962 | 100.0 | \$317,083,369 | 100.0 | \$370,132,642 | 100.0 |
| Secondary | 60,964,268 | 23.0 | 88,362,942 | 27.9 | 109,045,448 | 29.5 |
| Postsecondary | 61,291,196 | 23.1 | 72,107,104 | 22.8 | 82,229,785 | 22.2 |
| Adult | 12,453,465 | 4.7 | 15,983,122 | 5.1 | 21,481,578 | 5.8 |
| Disadvantaged | 42,352,806 | 15.9 | 51,819,442 | 16.3 | 63,565,259 | 17.2 |
| Handicapped | 21,407,829 | 8.1 | 33,871,902 | 10.7 | 37,899,822 | 10.2 |
| Construction | 34,429,935 | 13.0 | 51,477,906 | 16.2 | 55,701,484 | 15.0 |
| Ancillary | 28,164,754 | 10.6 | (40,072,020) ^{1/} | (12.8) | (50,178,827) ^{1/} | (13.6) |
| Guidance & Counseling | 4,259,865 | 1.6 | (7,333,812) ^{1/} | (2.3) | (10,141,102) ^{1/} | (2.7) |
| Contracted Instruction | (1,208,798) ^{1/} | (0.5) | (1,488,325) ^{1/} | (0.5) | (506,951) ^{1/} | (0.1) |

^{1/} Reported as memo amount expended by level.

Table 8. EXPENDITURES FOR VOCATIONAL EDUCATION, BY LEVEL AND SOURCE
FISCAL YEARS 1970-1977
(In Thousands)

| | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1977</u> <u>(Projected)</u> |
|---------------|-------------|-------------|-------------|-----------------------------------|
| Secondary | \$929,023 | \$1,560,889 | \$1,752,449 | \$3,265,000 |
| Federal | 161,026 | 250,328 | 296,347 | 525,000 |
| State/Local | 767,997 | 1,310,561 | 1,456,102 | 2,740,000 |
| Postsecondary | 454,142 | 566,978 | 707,163 | 1,310,000 |
| Federal | 89,752 | 110,046 | 123,567 | 223,000 |
| State/Local | 364,390 | 455,932 | 583,596 | 1,087,000 |
| Adult | 93,774 | 218,194 | 196,514 | 375,000 |
| Federal | 19,148 | 33,719 | 44,092 | 72,000 |
| State/Local | 74,626 | 184,475 | 152,422 | 303,000 |

Table 9. TOTAL EXPENDITURES FOR VOCATIONAL EDUCATION, BY TARGET GROUP & LEVEL
FISCAL YEARS 1970-1977
(In Thousands)

| | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1977</u> <u>(Projected)</u> |
|---------------|-------------|-------------|-------------|-----------------------------------|
| Disadvantaged | \$ 110,563 | \$ 219,127 | \$ 290,074 | \$ 540,000 |
| Secondary | 78,233 | 147,792 | 214,190 | 400,000 |
| Postsecondary | 23,733 | 31,460 | 37,768 | 70,000 |
| Adult | 8,597 | 39,875 | 38,116 | 70,000 |
| Handicapped | 38,544 | 62,983 | 67,467 | 150,000 |
| Secondary | 27,944 | 46,353 | 54,731 | 115,000 |
| Postsecondary | 8,740 | 9,618 | 8,022 | 20,000 |
| Adult | 1,860 | 7,012 | 4,714 | 15,000 |
| Regular | 1,288,527 | 2,063,959 | 2,298,585 | 4,260,000 |
| Secondary | 811,454 | 1,366,744 | 1,483,527 | 2,740,000 |
| Postsecondary | 397,201 | 525,908 | 661,374 | 1,230,000 |
| Adult | 79,872 | 171,307 | 153,684 | 290,000 |

SECTION III. TEACHERS IN VOCATIONAL EDUCATION

In Figure 4, the growth in number of teachers from 1965 through 1972 is presented graphically.

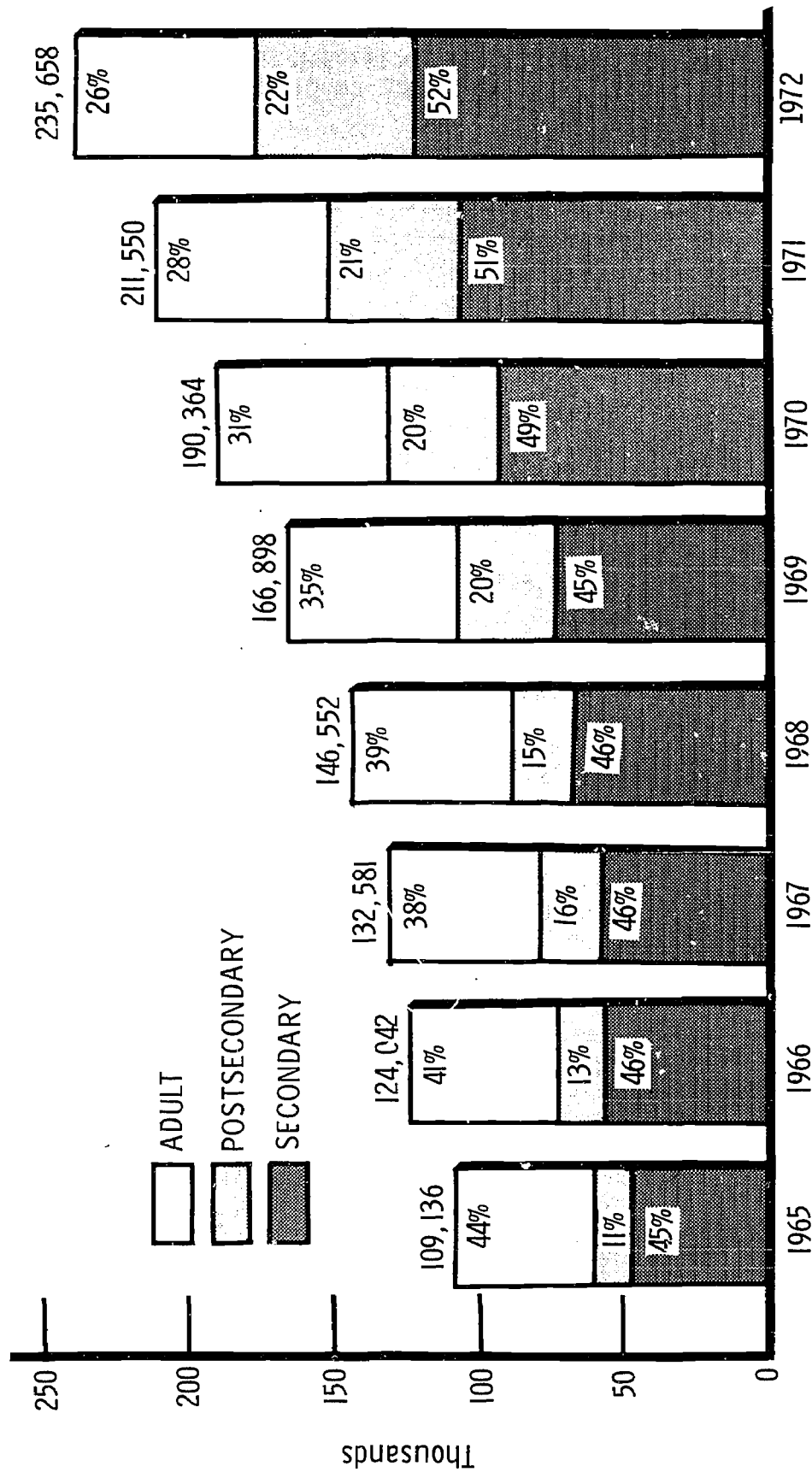
The number of individual teachers in vocational education, as shown in Table 10, grew from 109,136 in 1965 to 235,658 in 1972. For the same period, the greatest increase in number of teachers was at the postsecondary level--up 415 percent. Secondary-level teachers increased two and one-half times in number, and the number of teachers at the adult level increased less than 50 percent. Secondary-level teachers constitute over 50 percent of the total with postsecondary teachers making up 22 percent and the percentage of adult teachers continuing to decline to about 26 percent. The number of teachers for the disadvantaged and the handicapped show a gradual increase over the period of years.

In Table 11, it is noted that the number of enrollees in preservice training leveled off in 1971 and again increased in 1972 while enrollees in inservice training showed a substantial increase in 1971 and leveled off in 1972.

Table 12 shows the number and distribution of teachers by program. Trade and industrial education accounts for the largest number of teachers, followed by office education and home economics. Significant and steady growth in number of teachers occurred in all programs except agriculture which declined from 1965 to 1969 and again in 1970. Percentages of the total number of teachers in distribution, technical, and trade and industrial show little change from 1965 to 1972. Health and office doubled in proportion to the total and agriculture and home economics showed substantial decreases in percentages during the 8-year period.

Figure 5 shows the total number of teachers in preservice and inservice teacher-education programs from 1965 through 1972.

**Figure 4. TEACHERS OF VOCATIONAL EDUCATION, BY LEVEL
FISCAL YEARS 1965-1972**



SOURCE: Annual Reports, Division of Vocational and Technical Education, 1965-1972, and unpublished Division data.

Table 10. TEACHERS OF VOCATIONAL EDUCATION, BY LEVEL
FISCAL YEARS 1970-1977

| | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1977</u> <u>(Projected)</u> |
|-------------------------|-------------|-------------|-------------|-----------------------------------|
| Number | | | | |
| Total (Unduplicated) | 190,364 | 211,550 | 235,658 | 350,000 |
| Secondary | 101,043 | 118,919 | 131,404 | 193,000 |
| Postsecondary | 41,416 | 48,874 | 56,311 | 85,000 |
| Adult | 62,399 | 63,583 | 67,242 | 100,000 |
| Disadvantaged | (9,701) | (11,933) | (15,007) | (24,500) |
| Handicapped | (2,615) | (3,609) | (4,919) | (10,500) |
| Percentage Distribution | | | | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Secondary | 49.3 | 51.4 | 51.5 | 51.0 |
| Postsecondary | 20.2 | 21.1 | 22.1 | 22.5 |
| Adult | 30.5 | 27.5 | 26.4 | 26.5 |
| Disadvantaged | (5.1) | (5.6) | (6.4) | (7.0) |
| Handicapped | (1.4) | (1.7) | (2.1) | (3.0) |

Table 11. ENROLLMENTS IN TEACHER EDUCATION
FISCAL YEARS 1970-1977

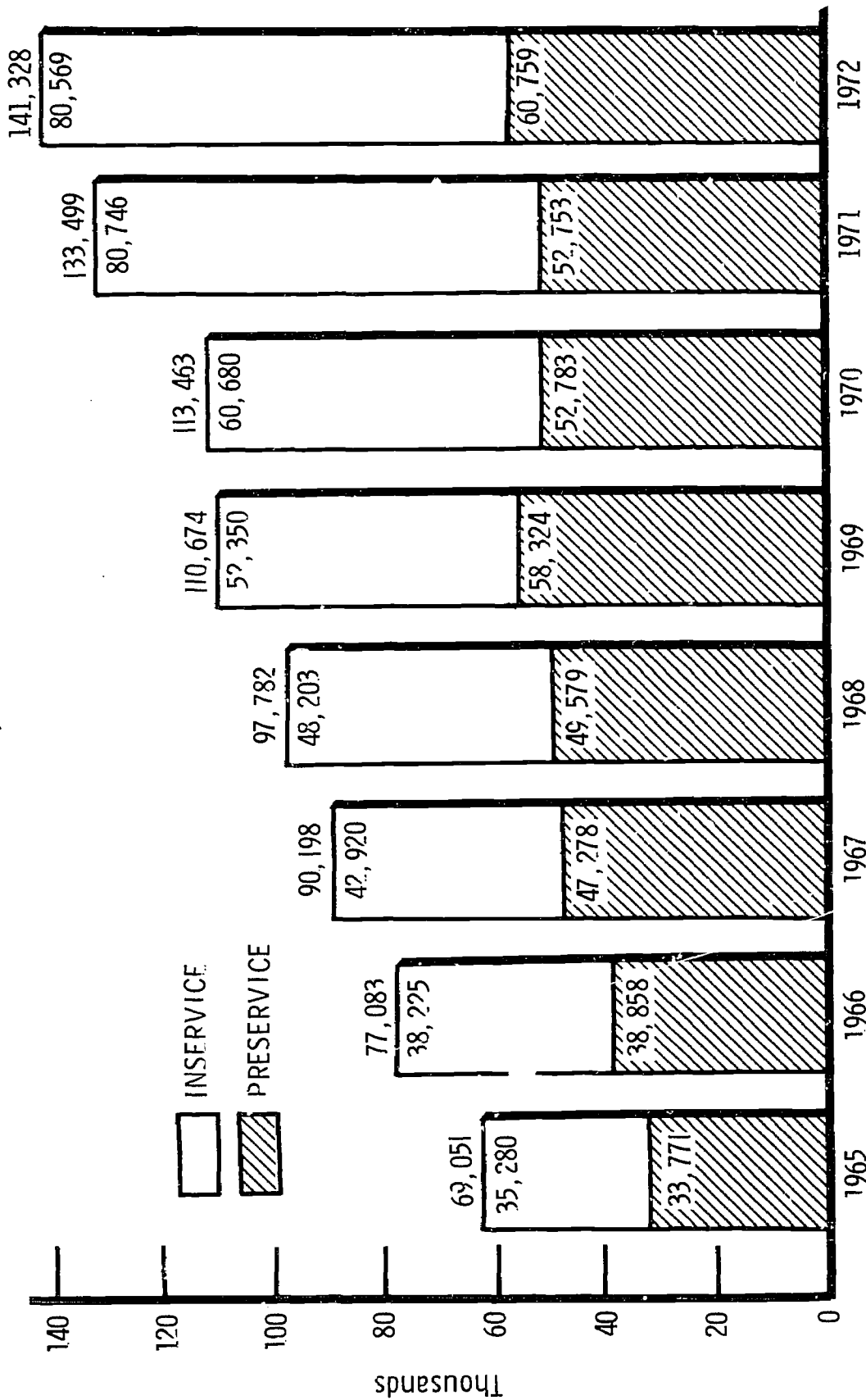
| | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1977</u> <u>(Projected)</u> |
|------------|-------------|-------------|-------------|-----------------------------------|
| Preservice | 52,783 | 52,753 | 60,759 | 80,500 |
| Inservice | 60,680 | 80,746 | 80,569 | 120,000 |

Table 12. TEACHERS OF VOCATIONAL EDUCATION, BY PROGRAM
FISCAL YEARS 1965-1972

| | <u>1965</u> | <u>1969</u> | <u>1970</u> | <u>1971</u> | <u>1972</u> |
|-------------------------|-------------|-------------|-------------|---------------------|---------------------|
| Number | | | | | |
| Total (Unduplicated) | 109,136 | 166,898 | 190,364 | 211,550 | 235,658 |
| Agriculture | 17,608 | 12,565 | 12,420 | 12,910 | 13,270 |
| Distribution | 7,200 | 9,741 | 10,458 | 11,974 | 13,795 |
| Health | 3,429 | 8,876 | 10,483 | 12,613 | 14,552 |
| Home Economics | 31,243 | 31,845 | 34,225 | 38,105 | 41,547 |
| Office | 15,850 | 37,923 | 45,081 | 49,363 | 52,662 |
| Technical | 9,213 | 13,488 | 14,241 | 14,750 | 16,820 |
| Trades and Industry | 39,804 | 50,592 | 56,720 | 59,065 | 65,105 |
| Other | 483 | 2,087 | 6,736 | 6,540 ^{1/} | 6,369 ^{1/} |
| Percentage Distribution | | | | | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Agriculture | 15.1 | 7.5 | 6.5 | 6.3 | 5.9 |
| Distribution | 5.9 | 5.8 | 5.5 | 5.8 | 6.2 |
| Health | 2.8 | 5.3 | 5.5 | 6.1 | 6.5 |
| Home Economics | 23.9 | 19.1 | 18.0 | 18.6 | 18.5 |
| Office | 12.7 | 22.7 | 23.7 | 24.0 | 23.5 |
| Technical | 6.9 | 8.1 | 7.5 | 7.2 | 7.5 |
| Trades and Industry | 30.8 | 30.3 | 29.8 | 28.8 | 29.1 |
| Other | 1.9 | 1.2 | 3.5 | 3.2 | 2.8 |

^{1/} Includes only teachers in occupational programs. Unduplicated total includes also 30,418 teachers in 1971 and 37,562 teachers in 1972 teaching in special programs.

Figure 5. ENROLLMENTS IN TEACHER EDUCATION 1965-1972



SOURCE: Annual Reports, Division of Vocational and Technical Education, 1965-1972.