

DOCUMENT RESUME

ED 069 933

VT 018 017

TITLE Trends in Vocational Education.  
INSTITUTION Bureau of Adult, Vocational, and Technical Education  
(DHEW/OE), Washington, D.C.  
REPORT NC Voc-Educ-Inf-II  
PUB DATE Jul 72  
NOTE 26p.

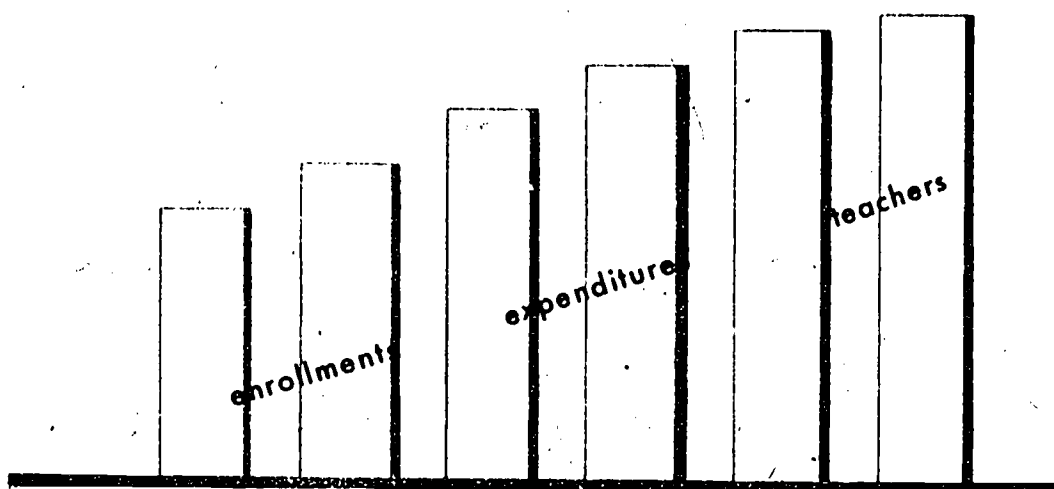
EDRS PRICE MF-\$0.65 HC-\$3.29  
DESCRIPTORS Administrator Guides; \*Educational Trends; Employment  
Statistics; Enrollment Projections; \*Enrollment  
Trends; \*Expenditures; Federal Programs; \*Tables  
(Data); Teacher Employment; Vocational Development;  
\*Vocational Education

ABSTRACT

This government report, the second in the "Vocational Education Information" series for fiscal year 1971, includes numerous tables and graphs to present data concerning various trends in vocational education for fiscal year 1965 and other selected fiscal years through 1971. Vocational education trends in enrollments, expenditures, and teacher employment are given separately, including the United States and outlying areas. This statistical information, derived from annual reports published by the Division of Vocational and Technical Education and unpublished data from state annual reports and state plan projections, will prove useful for those interested in the nature and scope of vocational education in the United States, especially program administrators. Projected data are provided for fiscal year 1976, and changes and adjustments from previous reporting methods are explained. The data show significant growth in vocational education, such as curriculum improvements, expanded enrollment, and increased expenditures. In addition, new facilities and equipment and better reporting techniques also reflect the impact of the Vocational Education Acts of 1963 and 1968, although their influence is not fully apparent until fiscal year 1971. (AG)

Vocational Education Information No. II

TRENDS  
IN  
VOCATIONAL EDUCATION



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
Office of Education  
Bureau of Adult, Vocational, and Technical Education  
Division of Vocational and Technical Education  
Washington, D.C. 20202

## FOREWORD

This document, the second in the "Vocational Education Information" series for fiscal year 1971, 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 Harold F. Duis, Reports and Data, from State annual reports and State plan projections. The actual data cover fiscal year 1965 and other selected fiscal years through 1971, and the projected data are for fiscal year 1976.

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.

**MICHAEL RUSSO**  
Acting Director  
Division of Vocational  
and Technical Education

**ROBERT M. WORTHINGTON**  
Associate Commissioner  
Bureau of Adult, Vocational,  
and Technical Education

July 1972

## 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 1971, showing the influence of major legislation on enrollment growth. Within the 53-year period, enrollments grew from 164,168 to about 10.5 million. Figure 2 charts the year-to-year changes in enrollments from 1965 through 1971. Large yearly increases in total enrollment occurred in 1965, 1967, and again in 1971; secondary enrollment in 1965, 1970, and 1971; postsecondary 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, 800,000 in 1970, and 1.7 million in 1971.

Table 1 shows that total vocational education enrollments increased from 5,430,611 in 1965 to 10,495,411 in 1971. The 1963 Act went into effect in 1965 and total enrollment jumped 18.9 percent, the largest percentage increase for any one year until 1971 when the increase was 19.4 percent.

Table 1 shows that 51.9 percent of the vocational enrollees in 1965 were in secondary programs, a proportion which remained constant until the 58.2 percent in 1970 and 61.9 percent in 1971. 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. Conversely, adult enrollment dropped from 43.8 percent of the 1965 enrollment to 27.2 percent in 1971 and the 1976 projection forecasts a declining trend to 25.3 percent.

The first year for reporting services to persons with special needs was 1965, during which 25,638 of these persons were enrolled in separate classes. 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 handicapped and for the disadvantaged. Thus, Table 1 shows inclusion of disadvantaged and handicapped persons in the enrollment levels and totals for 1970 and 1971.

Table 2 compares secondary vocational enrollment to the total secondary enrollment (grades 9-12 only). Vocational enrollment for the 1965-1971 period increased more rapidly than the total secondary enrollment, from 24.2 percent to 37.6 percent. For the same period, enrollment in vocational programs which prepare for gainful employment increased from 11.9 percent to 24.3 percent. Enrollment projections show that in 1976 over half (54.3 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 increased from 54.5 percent in 1965 to 55.7 percent in 1971. By level, however, females account for almost two-thirds of the secondary enrollment. Male enrollees at the postsecondary level decreased in proportion, but constitute over 60 percent of the total. The proportion of females at the adult level increased from 42.7 percent in 1965 to 46.1 percent in 1970.

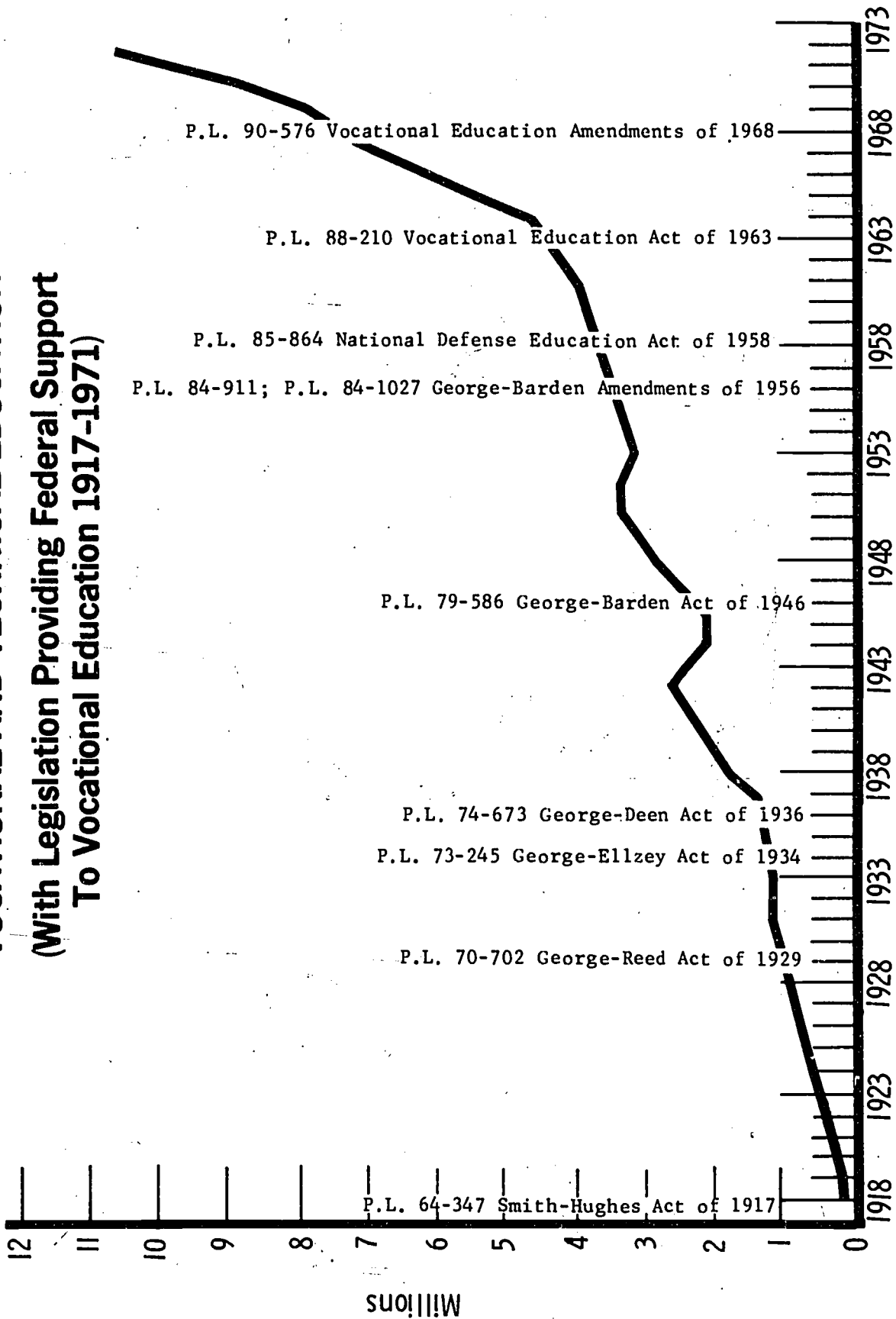
A look at enrollment distribution in the several vocational programs reveals a new trend in agriculture enrollment. In 1960 no females were enrolled in agriculture, but in 1965 females constituted 0.4 percent of the program's enrollment. This trend accelerated and by 1971 they represented 4.1 percent of the enrollment in agriculture. Male enrollment in health increased from 4.9 percent to 12.3 percent between 1965 and 1971, and in home economics from 3.1 percent to 7.2. The enrollment distribution by sex remained relatively stable in other vocational programs.

Enrollments by OE instructional programs, as shown in Table 4, reveal some rather significant trends over the period 1966-1971. 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, accounting and computing, metalworking, fireman training, auto mechanics, general merchandise, and electrical occupations. All but fireman training and electrical occupations remained in the top ten in 1971, being replaced by business data processing and drafting.

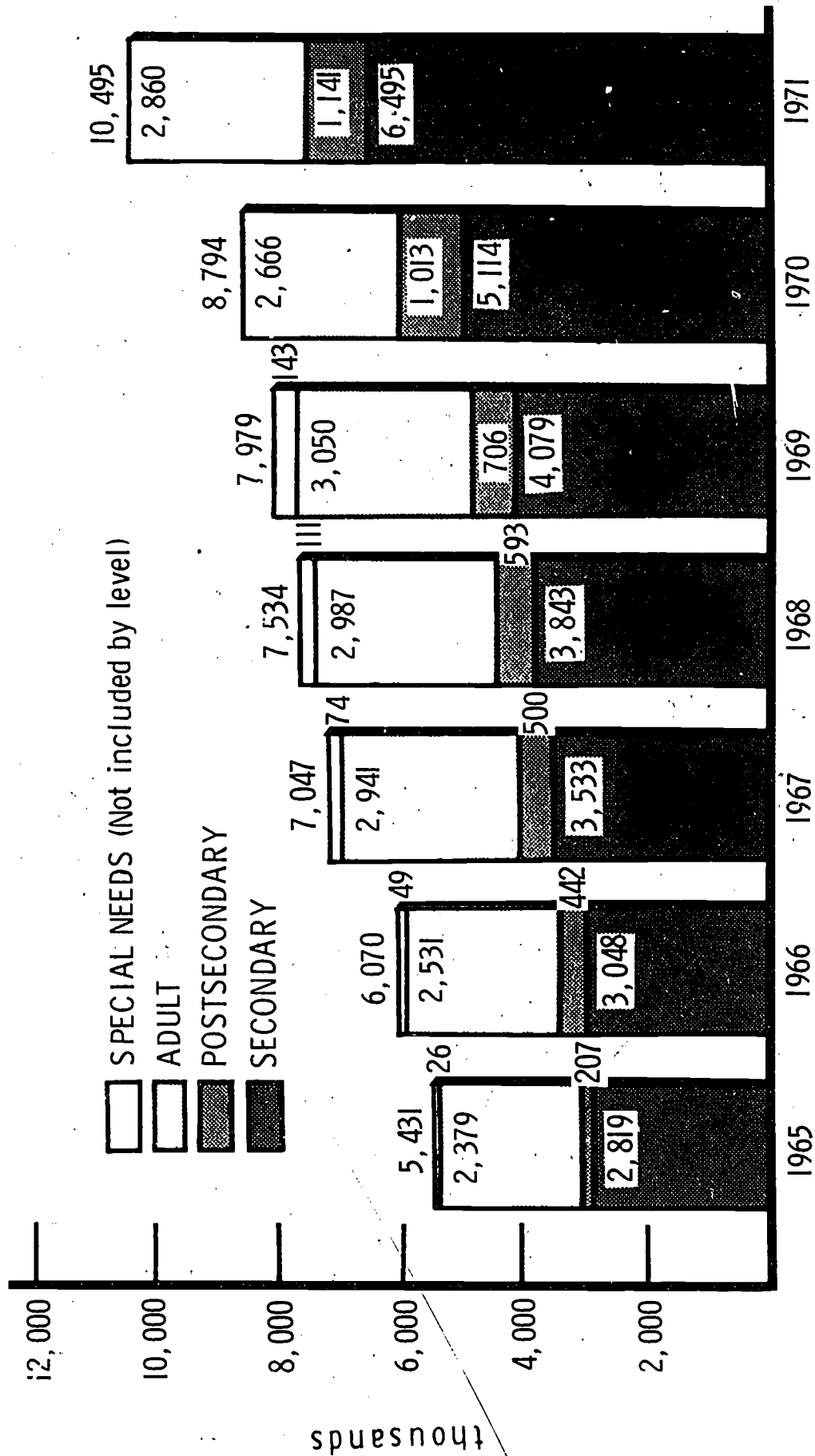
The largest percentage increases from 1966 to 1971 were in agricultural resources, associate degree nurse, inhalation therapy, care and guidance of children, clothing management, and other automotive. Other programs with large percentage increases in enrollment included agricultural mechanics, ornamental horticulture, advertising services, dental laboratory technician, medical laboratory assistant, health assistant, radiologic technology, food management and production, home furnishings, equipment, and services, personnel training and related, supervisory and administrative management, air conditioning, appliance repair, blueprint reading, drafting, electronics occupations, and small engine repair. The following programs decreased enrollment: agricultural production, agricultural products, agricultural supplies, home furnishings, mechanical technology, metallurgical technology, materials support, electrical occupations, real estate, and custodial services.

**Figure 1. TOTAL ENROLLMENTS  
VOCATIONAL AND TECHNICAL EDUCATION  
(With Legislation Providing Federal Support  
To Vocational Education 1917-1971)**



SOURCE: Annual Reports, Division of Vocational and Technical Education, 1918-1971, and unpublished Division data.

**Figure 2. TOTAL ENROLLMENTS IN VOCATIONAL EDUCATION 1965-1971**  
(In Thousands)



SOURCE: Annual Reports, Division of Vocational and Technical Education, 1965-1971, and unpublished Division data.

Table 1. ENROLLMENTS IN VOCATIONAL EDUCATION, BY LEVEL AND TARGET GROUP  
FISCAL YEARS 1965-1976

	<u>1965</u>	<u>1970</u>	<u>1971</u>	<u>1976</u> <u>(Projected)</u>
<b>Number</b>				
Total	5,430,611	8,793,960	10,495,411	15,576,000
Secondary	2,819,250	5,114,451	6,494,641	9,285,000
Postsecondary	207,201	1,013,426	1,140,943	2,348,000
Adult	2,378,522	2,666,083	2,859,827	3,943,000
Disadvantaged	25,638	(805,384)	(1,414,437)	(2,206,000)
Handicapped		(115,219)	(208,781)	(380,000)
<b>Percentage Distribution</b>				
Total	100.0	100.0	100.0	100.0
Secondary	51.9	58.2	61.9	59.6
Postsecondary	3.8	11.5	10.9	15.1
Adult	43.8	30.3	27.2	25.3
Disadvantaged	0.5	(9.2)	(13.5)	(14.2)
Handicapped		(1.3)	(2.0)	(2.4)
<b>Percentage Change From Previous Year</b>				
Total	18.9	10.2	19.4	---
Secondary	31.7	25.4	26.9	---
Postsecondary	21.3	43.5	12.6	---
Adult	5.5	-12.5	7.2	---
Disadvantaged	---	220.5	(75.6)	+
Handicapped			(81.1)	---

57



Table 2. SECONDARY ENROLLMENT IN VOCATIONAL EDUCATION (GRADES 9-12)  
FISCAL YEARS 1965-1976

	<u>1965</u>	<u>1970</u>	<u>1971</u>	<u>1976</u> (Projected)
Total Secondary Enrollment <sup>1/</sup>	11,628,000	13,282,000	13,597,000	15,200,000 <sup>2/</sup>
Vocational Education Enrollment	2,819,250	4,714,451	5,111,273	8,250,000
Percentage in Vocational Education	24.2	35.5	37.6	54.3
Vocational Education Enrollment (Less Homemaking)	1,390,443	2,979,629	3,305,856	6,250,000
Percentage in Vocational Education	11.9	22.4	24.3	41.1

<sup>1/</sup> U.S. Office of Education, National Center for Educational Statistics. Digest of Educational Statistics (OE-10024-71), Table 28. Washington: U.S. Government Printing Office.

<sup>2/</sup> U.S. Office of Education, National Center for Educational Statistics. Projections of Educational Statistics to 1976-77 (OE-10030-67), Table 2. Washington: U.S. Government Printing Office.

Table 3. PERCENTAGE DISTRIBUTION OF ENROLLMENT IN VOCATIONAL  
EDUCATION PROGRAMS, BY SEX  
FISCAL YEARS 1965-1976

	<u>1965</u>	<u>1970</u>	<u>1971</u>	<u>1976</u> (Projected)
<b>Total</b>	100.0	100.0	100.0	100.0
<b>By Level</b>				
<b>All Programs</b>				
Male	45.5	45.0	44.3	42.0
Female	54.5	55.0	55.7	58.0
<b>Secondary</b>				
Male	34.0	37.4	--	36.0
Female	66.0	62.6	--	64.0
<b>Postsecondary</b>				
Male	65.4	60.7	--	60.0
Female	34.6	39.3	--	40.0
<b>Adult</b>				
Male	57.3	53.9	--	52.0
Female	42.7	46.1	--	48.0
<b>By Program</b>				
<b>Agriculture</b>				
Male	99.6	--	95.9	94.0
Female	0.4	--	4.1	6.0
<b>Distribution</b>				
Male	55.7	--	55.3	54.0
Female	44.3	--	44.7	46.0
<b>Health</b>				
Male	4.9	--	12.3	13.0
Female	95.1	--	87.7	87.0
<b>Home Economics</b>				
Male	3.1	--	7.2	8.0
Female	96.9	--	92.8	92.0
<b>Office</b>				
Male	20.7	--	24.5	26.0
Female	79.3	--	75.5	74.0
<b>Technical</b>				
Male	91.6	--	92.3	92.0
Female	8.4	--	7.7	8.0
<b>Trades and Industry</b>				
Male	89.6	--	89.1	88.0
Female	10.4	--	10.9	12.0

Table 4. ENROLLMENT IN VOCATIONAL EDUCATION BY OE INSTRUCTIONAL PROGRAMS  
FISCAL YEARS 1966-1976

OE Instructional Program	1966	1969	1970	1971	1976 (Projected)
Agricultural Production	778,752	645,377	584,757	557,633	445,300
Agricultural Supplies	36,309	19,287	21,522	20,583	25,000
Agricultural Mechanics	22,622	89,861	104,749	120,745	130,000
Agricultural Products	28,792	11,179	12,111	9,235	21,000
Ornamental Horticulture	10,509	41,239	47,259	48,267	77,300
Agricultural Resources	300	13,790	17,167	20,000	25,000
Forestry	3,812	17,696	19,681	16,675	30,000
Other Agriculture *	26,258	12,296	45,737	53,289	60,000
Advertising Services	3,905	9,136	14,402	26,748	30,000
Apparel and Accessories	18,547	20,538	21,222	20,569	23,500
Automotive	--	--	6,766	7,231	20,000
Auto and Petroleum	9,854	13,418	--	--	--
Finance and Credit	15,792	18,947	20,259	23,543	30,000
Floristry	--	--	2,274	3,708	6,000
Food Distribution	19,540	27,430	37,556	25,101	39,300
Food Services	26,795	37,449	29,229	28,168	40,000
General Merchandise	85,583	120,586	132,712	199,728	250,000
Hardware	4,717	5,214	2,383	5,540	8,000
Home Furnishings	6,764	5,822	3,255	4,734	8,000
Hotel and Lodging	9,558	14,842	16,457	13,098	22,900
Industrial Marketing	--	--	7,080	8,141	10,000
Insurance	13,461	13,209	13,536	14,226	18,000
International Trade	--	2,330	347	1,549	5,800
Petroleum	--	--	4,897	5,087	8,000
Personal Services	--	--	15,466	13,461	25,000
Real Estate	78,344	67,531	50,936	73,018	90,000
Recreation and Tourism	--	--	3,202	10,431	15,000
Transportation	5,862	10,970	11,714	12,794	20,000
Other Distributive Education *	121,704	196,009	135,672	81,762	132,100

See footnote at end of table.

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

OE Instructional Program	1966	1969	1970	1971	1976
					(Projected)
Dental Assistant	6,304	10,850	8,291	12,189	25,000
Dental Hygienist	935	2,972	2,845	3,828	7,500
Dental Laboratory Technician	3,356	2,085	2,052	2,581	7,000
Medical Laboratory Assistant	976	6,214	9,585	5,650	10,000
Other Medical Lab. Technology	--	--	--	7,798	15,000
Nurse, Associate Degree	4,215	25,430	26,884	47,090	75,000
Practical Nurse	47,990	68,740	57,465	73,372	85,000
Health Assist. (Nurse's Assist., Aide)	10,122	32,487	51,503	54,868	150,000
Occupational Therapy Assistant	--	492	458	686	1,500
Physical Therapy	--	--	--	1,200	2,500
Radiologic Technology	541	2,570	2,316	4,868	10,000
Environmental Health	--	--	--	2,998	6,000
Mental Health Technology	--	--	--	2,380	5,000
Inhalation Therapy Technician	38	1,309	2,981	3,767	7,000
Medical Assistant	--	--	3,831	7,549	15,000
Health Aide	--	--	--	2,282	25,000
Other Health Occupations *	9,200	21,952	29,833	38,112	53,500
Care and Guidance of Children	4,038	20,648	27,775	49,338	60,500
Clothing Management	3,889	17,029	36,060	39,426	43,100
Food Management and Production	13,265	45,195	51,242	67,077	93,200
Home Furnishings, Equipment, & Services	702	8,832	9,849	11,433	15,000
Institutional and Home Management	4,043	5,330	7,274	6,701	10,000
Other Occupational Preparation	15,909	16,263	18,994	23,617	28,200
Accounting and Computing	239,783	249,209	301,353	329,281	350,000
Business Data Processing Systems	42,764	134,723	165,977	181,313	272,000
Filing, Office Machines, Clerical	294,334	386,826	381,875	364,274	400,000
Information Communication	5,623	18,829	23,572	26,788	38,600
Materials Support, Transporting, Storing, and Recording	16,524	14,119	12,441	11,860	15,000
Personnel, Training, and Related	514	9,721	9,268	11,924	23,500

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

OE Instructional Program	1966	1969	1970	1971	1976
					(Projected)
Stenographic, Secretarial	418,749	482,324	470,030	533,221	600,000
Supervisory & Administrative Mgt.	9,745	33,816	50,895	70,050	89,900
Typing and Related	185,244	458,714	555,357	612,770	868,900
Other Office Occupations *	24,762	46,843	140,392	88,212	76,200
Aeronautical Technology	5,987	2,624	4,339	6,095	7,000
Architectural Technology	7,162	16,558	8,128	14,716	30,000
Automotive Technology	--	4,001	4,507	5,021	10,000
Chemical Technology	2,848	2,901	3,267	6,393	8,000
Civil Technology	9,602	13,885	12,346	19,216	25,000
Electrical Technology	16,752	14,053	11,765	19,355	24,000
Electronics Technology	67,207	74,941	57,520	67,335	100,000
Electro-Mechanical Technology	--	2,451	1,877	4,829	10,000
Environmental Control Technology	2,423	2,559	2,035	2,956	6,000
Industrial Technology	8,438	6,124	9,345	9,457	15,000
Instrumentation Technology	2,109	3,747	2,294	4,089	6,500
Mechanical Technology	52,348	32,701	27,976	25,249	38,000
Metallurgical Technology	7,521	1,490	2,162	2,779	4,500
Scientific Data Processing	--	35,914	18,162	15,949	22,000
Commercial Pilot Training	--	6,388	7,264	7,381	12,000
Fire and Safety Technology	5,041	2,239	4,470	8,377	15,000
Forestry Technology	--	--	--	2,298	4,000
Oceanographic Technology	--	3,963	1,002	1,664	5,000
Police Science Technology	--	8,109	18,796	36,099	45,000
Air Pollution Technology	--	--	--	356	3,000
Water & Waste Water Technology	--	--	169	802	4,000
Other Technical Education *	66,400	80,662	74,306	53,482	62,700
Air Conditioning	12,346	27,027	28,391	52,575	69,000
Appliance Repair	2,254	7,937	8,971	9,474	20,000
Body and Fender, Auto	12,912	22,071	24,458	39,703	43,800
Mechanics	98,377	126,372	131,475	176,203	200,000
Other Automotive	3,931	35,168	60,961	52,215	77,300

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

<u>OE Instructional Program</u>	<u>1966</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1976</u> (Projected)
Aviation Occupations	17,481	38,187	32,641	33,804	69,400
Blueprint Reading	2,785	17,197	15,446	13,694	23,000
Business Machine Maintenance	--	2,152	2,319	2,854	5,000
Commercial Art Occupations	10,612	16,952	20,971	23,983	26,500
Commercial Fishery Occupations	2,279	2,058	2,784	3,885	10,000
Commercial Photography Occup.	3,370	8,134	11,176	13,570	20,000
Carpentry	46,248	52,465	56,621	79,988	81,800
Electricity	41,481	37,381	47,765	53,120	54,600
Masonry	18,492	22,176	21,863	26,682	27,700
Plumbing & Pipefitting	31,471	32,022	27,821	35,420	39,900
Other Construction & Maint.	20,400	56,222	86,806	70,813	84,200
Custodial Services	19,391	14,492	14,567	16,292	18,200
Diesel Mechanic	4,362	7,018	8,680	9,568	10,000
Drafting Occupations	39,551	69,853	112,405	134,790	120,000
Electrical Occupations	81,507	67,682	61,849	57,865	98,900
Electronics Occupations	18,433	71,479	78,710	95,118	113,400
Fabric Maintenance Services	2,336	2,345	7,159	3,859	8,000
Foremanship, Super., & Mgt. Devel.	79,322	90,453	74,509	88,914	100,000
Graphic Arts Occupations	28,830	42,709	53,738	68,343	83,500
Industrial Atomic Energy	--	195	511	492	1,000
Instrument Maint. & Repair	2,015	2,790	3,078	2,616	6,000
Maritime Occupations	3,178	7,715	4,452	4,693	10,000
Metalworking Occupations	178,468	249,248	242,074	274,744	312,700
Metallurgy Occupations	--	1,656	1,407	3,367	5,000
Barbering	3,841	3,804	5,280	4,031	7,500
Cosmetology	29,957	34,417	37,395	45,045	50,000
Other Personal Services	--	12,203	17,905	15,985	20,000
Plastics Occupations	--	2,559	2,398	4,313	5,000
Fireman Training	107,550	131,580	99,294	128,822	167,600
Law Enforcement Training	34,111	60,167	47,931	65,021	99,300
Other Public Services	13,167	125,433	76,096	49,733	100,000

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

OE Instructional Program	1966	1969	1970	1971	1976 (Projected)
Quantity Food Occupations	11,882	27,044	23,053	37,253	52,000
Refrigeration	4,576	7,923	7,839	10,036	12,000
Small Engine Repair	4,542	7,853	13,028	19,182	25,000
Sta. Energy Sources Occupations	5,108	5,896	10,158	7,863	12,000
Textile Production & Fabrication	14,268	47,435	40,769	43,753	65,000
Leather Working	2,836	2,133	1,933	2,268	4,000
Upholstering	5,387	10,882	7,282	11,630	15,000
Woodworking Occupations	15,432	23,090	50,888	53,593	58,100
Other Trade & Industrial Education *	234,562	87,284	221,417	128,606	50,000
<u>Special Programs</u>					
Consumer and Homemaking	1,855,824	2,335,755	2,419,216	2,932,382	3,850,000
Prevocational	--	--	586,046	859,931	1,035,000
Remedial	--	--	27,240	57,554	100,000
Cooperative - Total	150,000	230,229	290,781	379,840	600,000
Part G	--	--	(23,001)	(70,469)	(160,000)
Work-Study	70,139	--	15,522	28,726	36,000

\* Other new and emerging occupations and cluster programs

## SECTION II. EXPENDITURES FOR VOCATIONAL EDUCATION

As shown in Table 5, the funds available for vocational and technical education increased significantly. Federal allotments rose from \$57 million in 1964 to \$169 million in 1965 and increased to \$413 million in the six succeeding years.

The table also shows total expenditures by source of funds and that State and local expenditures consistently overmatched the Federal dollar. The ratio increased from a low in 1965 when it had declined because of the influx of new Federal funds. State and local expenditures accounted for more than 80 percent of the total, except in 1965. In all years except 1965 and 1971 State and local funds increased at a faster rate than Federal funds.

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 States carried forward from 1971 for expenditure in 1972 about \$80 million.

Figure 3 shows graphically the increase in total expenditures from 1965 through 1971, 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, although declining from 1965 to 1970, still constituted about two-thirds of the total expenditures in 1971. Expenditures for instructional equipment and administration rank next. It is interesting to note that administrative expenditures were only 6.8 percent of the total. Other expenditures reported separately in 1970 and 1971 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 decrease in expenditures for secondary programs and construction and the accelerated percentage increase in funding programs for the disadvantaged and the handicapped. Also noteworthy is the increased proportion, 23 percent, expended for postsecondary programs, which was above the 15-percent minimum required by the 1968 Amendments. The 10-percent minimum required for programs for the handicapped was not met in 1970, but sufficient funds were carried over to more than meet this requirement



in 1971. Reporting was changed in 1971 to allocate expenditures for ancillary services 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. These data were first reported by States in 1970. In 1971, 66.5 percent of the expenditures were secondary, 24.2 percent postsecondary, and 9.3 percent adult compared to 62.9, 30.8, and 6.3 respectively in 1970. It can be noted that the ratio of Federal funds to State and local funds is somewhat higher for postsecondary than the other levels. Also the rate of increase in both Federal and State and local funds from 1970 to 1971 was less at the postsecondary level than at the other levels.

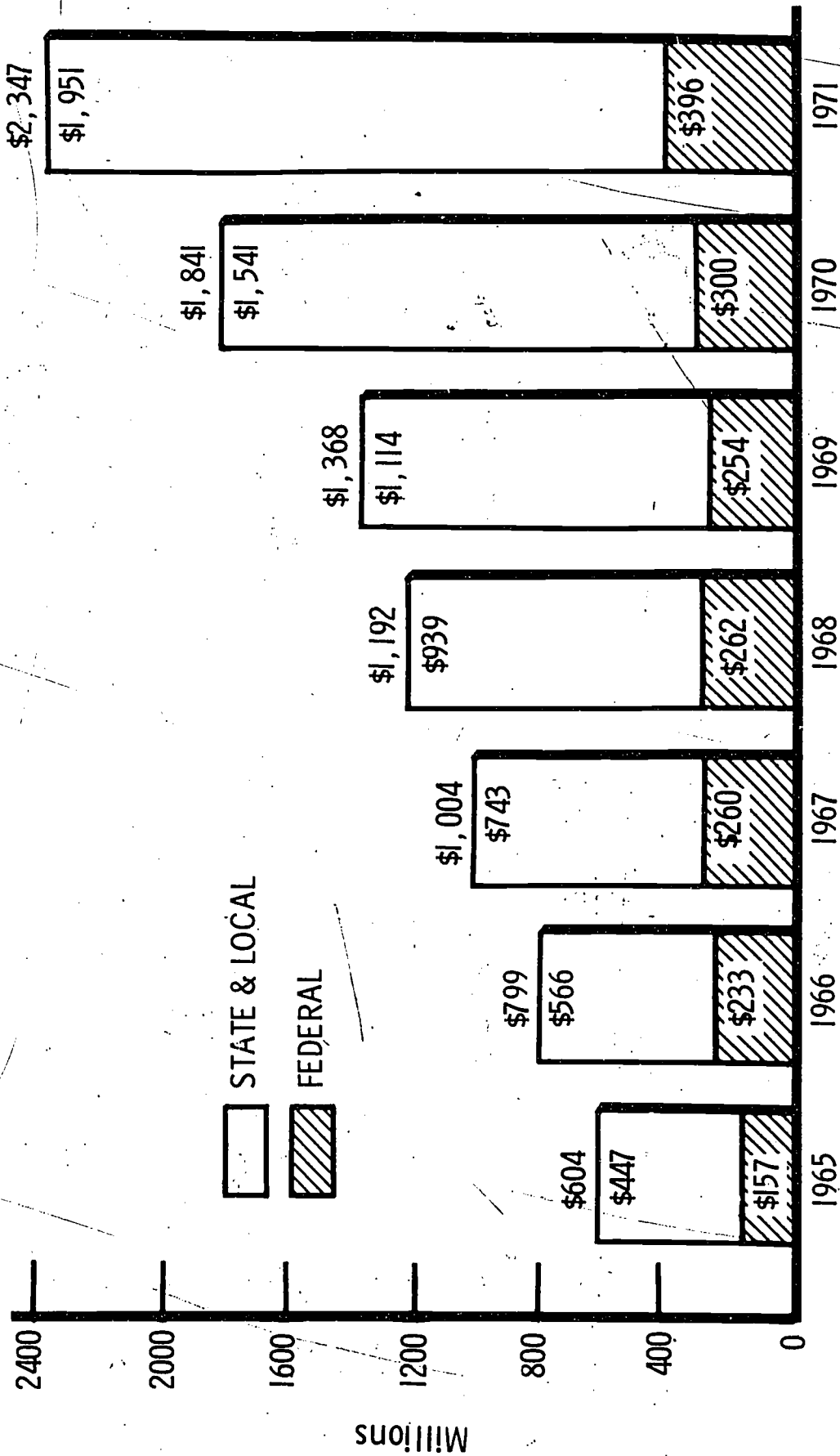
Table 9 shows total expenditures for all programs allocated by target population and by level. These data were first reported by States in 1970. In 1971, 9.3 percent of the expenditures were for the disadvantaged, having increased from 7.7 percent in 1970; and 2.7 percent was for handicapped, the same 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.

Table 5. TOTAL EXPENDITURES FOR VOCATIONAL EDUCATION, BY SOURCE OF FUNDS  
FISCAL YEARS 1965-1976

	<u>1965</u>	<u>1970</u>	<u>1971</u>	<u>1976</u> (Projected)
Grand Total	\$604,645,727	\$1,841,846,345	\$2,347,353,175	\$4,000,000,000
Federal	156,936,015	300,045,568	396,378,405	667,000,000
State/Local	447,709,712	1,541,800,777	1,950,974,770	3,333,000,000
Ratio: State/Local to Federal	\$2.90	\$5.14	\$4.92	\$5.00
Percentage Distribution				
Grand Total	100.0	100.0	100.0	100.0
Federal	26.0	16.3	16.9	16.7
State/Local	74.0	83.7	83.1	83.3
Percentage Change from Previous Year				
Grand Total	81.7	34.6	27.4	---
Federal	185.2	17.8	32.1	---
State/Local	61.2	38.4	26.5	---
Federal Allotments				
Total Allotments	\$168,607,278	\$365,347,467	\$412,812,093	
Smith-Hughes Act	7,266,455	---	---	
George-Barden Act	49,690,823	---	---	
VE Act of 1963	111,650,000	---	---	
1968 Amendments		365,347,467	412,812,093	

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

**1965-1971**  
(In Millions)



SOURCE: Annual Reports, Division of Vocational and Technical Education, 1965-1971.

Table 6. TOTAL EXPENDITURES FOR VOCATIONAL EDUCATION, BY FUNCTION\*  
FISCAL YEARS 1965-1976

	<u>1965</u>	<u>1970</u>	<u>1971</u>	<u>1976</u> <u>(Projected)</u>
	Amount			
Total	\$491,993,986	\$1,654,602,501	\$2,075,880,516	\$3,700,000,000
Administration	8,318,449 )	112,923,796	142,812,896	251,600,000
Supervision	27,169,658 )			
Teacher Education	9,508,092	33,094,548	26,878,892	62,900,000
Instruction <u>1/</u>	360,514,111	1,006,777,288	1,426,330,010	2,397,600,000
Research	1,171,613	4,411,258	12,260,295	18,500,000
Instructional Equipment	57,290,213	202,064,399	141,400,968	351,500,000
Vocational Guidance	3,094,832	57,299,303	66,608,650	122,100,000
Curriculum Development		2,932,235	8,474,618	11,100,000
Other <u>2/</u>	24,927,018	235,099,674	251,114,187	484,700,000
	Percentage Distribution			
Total	100.0	100.0	100.0	100.0
Administration	1.7 )	6.8	6.8	6.8
Supervision	5.5 )			
Teacher Education	1.9	2.0	1.3	1.7
Instruction <u>1/</u>	73.3	60.8	68.7	64.8
Research	0.2	0.3	0.7	0.5
Instructional Equipment	11.7	12.2	6.8	9.5
Vocational Guidance	0.6	3.5	3.2	3.3
Curriculum Development		0.2	0.4	0.3
Other <u>2/</u>	5.1	14.2	12.1	13.1

\* Excludes construction and work-study

1/ Includes instructional salaries in 1970 and 1971.

2/ Other allowable expenditures N.E.C. in 1965. Other instructional costs exclusive of salaries in 1970 and 1971, previously included in instruction.

Table 7. EXPENDITURES FROM VOCATIONAL EDUCATION ACT OF 1963 FUNDS\*, BY PURPOSE  
FISCAL YEARS 1965-1971

	1965		1970		1971	
	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total
Total	\$100,308,804	100.0	\$265,811,962	100.0	\$317,083,369	100.0
Secondary	32,398,818	32.2	60,964,268	23.0	88,362,942	27.9
Postsecondary	13,444,552	13.4	61,291,196	23.1	72,107,104	22.8
Adult	6,131,385	6.1	12,453,465	4.7	15,983,122	5.1
Special Needs <sup>1/</sup>	345,978	0.3	---	---	---	---
Disadvantaged	---	---	42,352,806	15.9	51,819,442	16.3
Handicapped	---	---	21,407,829	8.1	33,871,902	10.7
Construction	42,729,943	42.6	34,429,935	13.0	51,477,906	16.2
Ancillary	5,258,128	5.3	28,164,754	10.6	(40,072,020) <sup>2/</sup>	(12.8)
Guidance & Counseling <sup>3/</sup>	---	---	4,259,865	1.6	(7,333,812) <sup>2/</sup>	(2.3)
Contracted Instruction	---	---	(1,208,798) <sup>4/</sup>	(0.5)	(1,488,325) <sup>2/</sup>	(0.5)

\* Includes Vocational Education Act of 1963, Section 3 funds in 1965. Includes Vocational Education Act of 1963, as amended, Part B funds in 1970 and 1971.

<sup>1/</sup> Special needs expenditures reported separately for disadvantaged and handicapped starting in 1970.

<sup>2/</sup> Reported as memo amount expended by level.

<sup>3/</sup> Included in ancillary services prior to 1970.

<sup>4/</sup> First reported in 1970; memo amount expended by level.

Table 8. EXPENDITURES FOR VOCATIONAL EDUCATION, BY LEVEL AND SOURCE  
FISCAL YEARS 1970-1976  
(IN 000's)

	<u>1970</u>	<u>1971</u>	<u>1976</u> <u>(Projected)</u>
Secondary	\$929,023	\$1,560,889	\$2,640,000
Federal	161,026	250,328	397,000
State/Local	767,997	1,310,561	2,243,000
Postsecondary	454,142	566,978	960,000
Federal	89,752	110,046	220,000
State/Local	364,390	455,932	740,000
Adult	93,774	218,194	400,000
Federal	19,148	33,719	50,000
State/Local	74,626	184,475	350,000

Table 9. TOTAL EXPENDITURES FOR VOCATIONAL EDUCATION, BY TARGET GROUP & LEVEL  
FISCAL YEARS 1970-1976  
(IN 000's)

	<u>1970</u>	<u>1971</u>	<u>1976</u> <u>(Projected)</u>
Disadvantaged	\$110,563	\$219,127	\$400,000
Secondary	78,233	147,792	285,000
Postsecondary	23,733	31,460	60,000
Adult	8,597	39,875	55,000
Handicapped	38,544	62,983	160,000
Secondary	27,944	46,353	115,000
Postsecondary	8,740	9,618	25,000
Adult	1,860	7,012	20,000
Regular	1,288,527	2,063,959	3,440,000
Secondary	811,454	1,366,744	2,240,000
Postsecondary	397,201	525,908	900,000
Adult	79,872	171,307	300,000

### SECTION III. TEACHERS IN VOCATIONAL EDUCATION

In Figure 4, the growth in number of teachers from 1965 through 1971 is presented graphically.

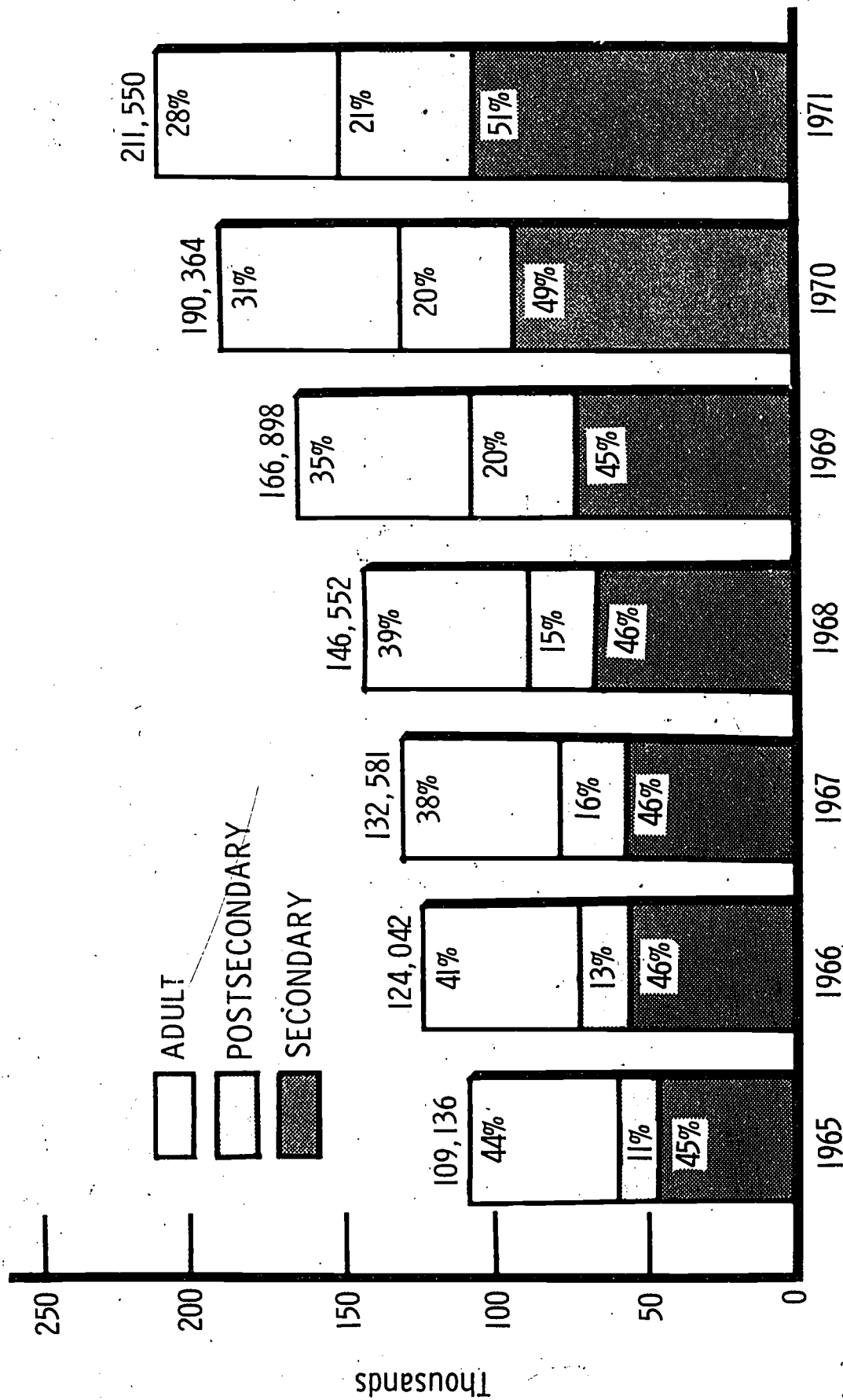
The number of individual teachers in vocational education, as shown in Table 10, grew from 109,136 in 1965 to 211,550 in 1971. For the same period, the greatest increase in number of teachers was at the post-secondary level--up about 400 percent. Secondary-level teachers doubled in number, and the number of teachers at the adult level increased only slightly. Secondary-level teachers increased to over 50 percent of the total between 1965 and 1971, but the percentage distribution for teachers at the adult level dropped from 43.8 percent in 1965 to 27.5 percent in 1971.

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

Figure 5 shows the total number of teachers in preservice and inservice teacher-education programs from 1965 through 1971.

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 growth in the number of health, office, technical, and trade and industrial teachers occurred from 1965 to 1971. The number of home economics and distribution teachers increased moderately and agriculture teachers declined in number. Percentages of the total number of teachers in distribution, technical, and trade and industrial show little change from 1965 to 1971. Health and office doubled in proportion to the total and agriculture and home economics showed substantial decreases in percentages during the 7-year period.

**Figure 4. TEACHERS OF VOCATIONAL EDUCATION, BY LEVEL  
FISCAL YEARS 1965-1971**



SOURCE: Annual Reports, Division of Vocational and Technical Education, 1965-1971, and unpublished Division data.



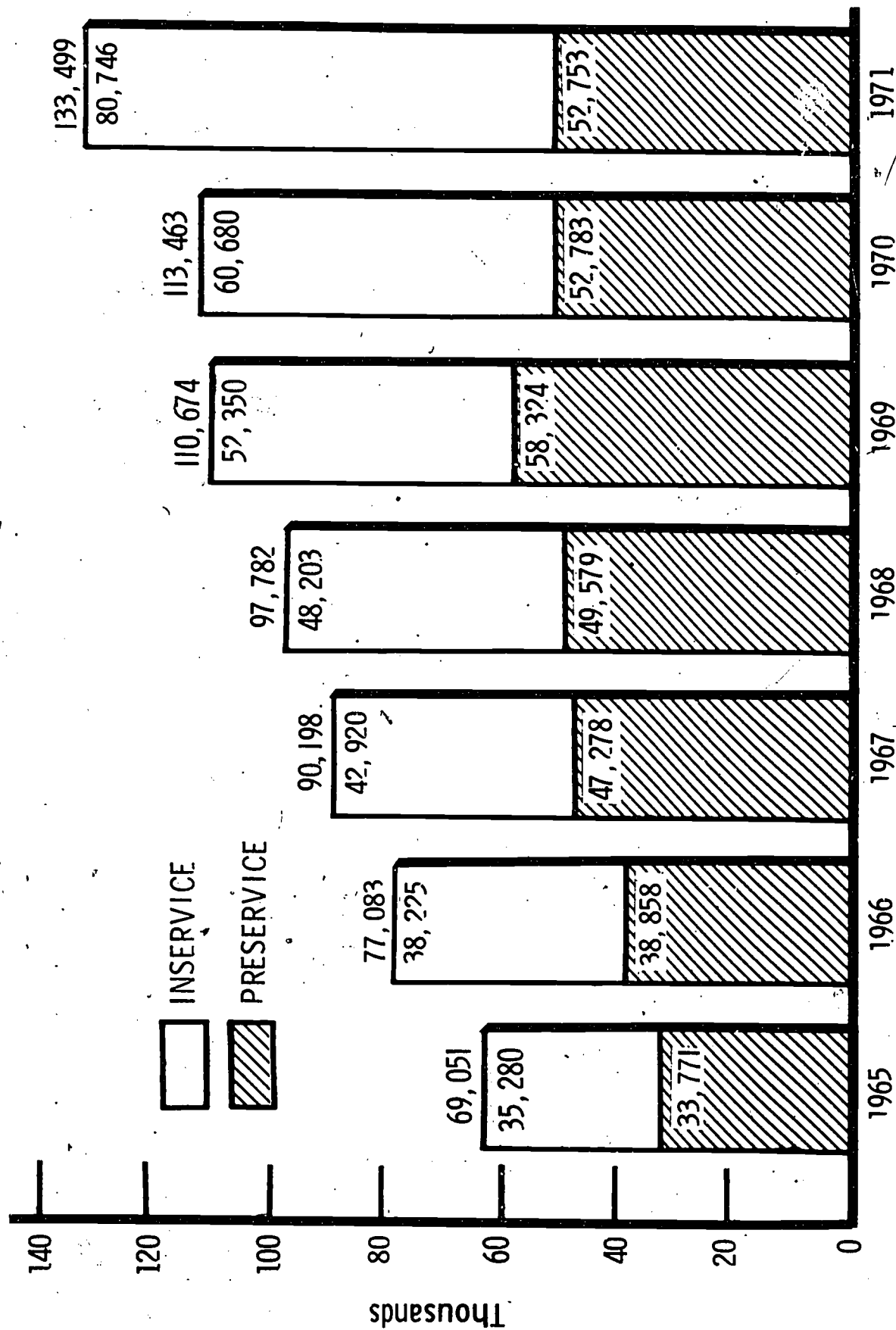
Table 10. TEACHERS OF VOCATIONAL EDUCATION, BY LEVEL  
FISCAL YEARS 1965-1976

	<u>1965</u>	<u>1970</u>	<u>1971</u>	<u>1976</u> <u>(Projected)</u>
	<u>Number</u>			
Total (Unduplicated)	109,136	190,364	211,550	295,000
Secondary	54,748	101,043	118,919	165,200
Postsecondary	13,583	41,416	48,874	73,300
Adult	54,048	62,399	63,583	85,500
Disadvantaged	1,102	(9,701)	(11,933)	(19,000)
Handicapped	---	(2,615)	(3,609)	(8,000)
	<u>Percentage Distribution</u>			
Total	100.0	100.0	100.0	100.0
Secondary	44.3	49.3	51.4	51.0
Postsecondary	11.0	20.2	21.1	22.6
Adult	43.8	30.5	27.5	26.4
Disadvantaged	0.9	(5.1)	(5.2)	(6.4)
Handicapped	---	(1.4)	(1.6)	(2.7)

Table 11. ENROLLMENTS IN TEACHER EDUCATION  
FISCAL YEARS 1965-1976

	<u>1965</u>	<u>1970</u>	<u>1971</u>	<u>1976</u> <u>(Projected)</u>
Preservice	33,771	52,783	52,753	80,000
Inservice	35,280	60,680	80,746	120,000

**Figure 5. ENROLLMENTS IN TEACHER EDUCATION 1965-1971**



SOURCE: Annual Reports, Division of Vocational and Technical Education, 1965-1971.

Table 12. TEACHERS OF VOCATIONAL EDUCATION, BY PROGRAM  
FISCAL YEARS 1965-1971

	<u>1965</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>
	Number				
<b>Total (Unduplicated)</b>	109,136	146,552	166,898	190,364	211,550
<b>Agriculture</b>	17,608	12,262	12,565	12,420	12,910
<b>Distribution</b>	7,200	8,542	9,741	10,458	11,974
<b>Health</b>	3,429	6,521	8,876	10,483	12,613
<b>Home Economics</b>	31,243	29,402	31,845	34,225	38,105
<b>Office</b>	15,850	31,428	37,923	45,081	49,363
<b>Technical</b>	9,213	10,276	13,488	14,241	14,750
<b>Trades and Industry</b>	39,804	47,742	50,592	56,720	59,065
<b>Other</b>	488	892	2,087	6,736	6,540
	Percentage Distribution				
<b>Total</b>	100.0	100.0	100.0	100.0	100.0
<b>Agriculture</b>	15.1	8.3	7.5	6.5	6.3
<b>Distribution</b>	5.9	5.8	5.8	5.5	5.8
<b>Health</b>	3.8	4.4	5.3	5.5	6.1
<b>Home Economics</b>	23.9	20.0	19.1	18.0	18.6
<b>Office</b>	12.7	21.4	22.7	23.7	24.0
<b>Technical</b>	6.9	7.0	8.1	7.5	7.2
<b>Trades and Industry</b>	30.8	32.5	30.3	29.8	28.8
<b>Other</b>	1.9	0.6	1.2	3.5	3.2