資 料 - 6

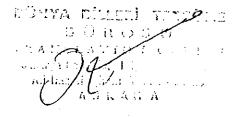
トルコ共和国における職業技術教育

REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION YOUTH AND SPORTS GENERAL DIRECTORATE OF TECHNICAL EDUCATION FOR MEN

INDUSTRIAL
TECHNICAL EDUCATION

IN
TURKEY

· MARCH-1986 ANKARA



VOCATIONAL AND TECHNICAL EDUCATION

Our educational system has been arranged in accordance with the spirit of our constitution and dynamism of Atatürk. When all the educational programs are being arranged, the fundemental objectives and principles of the Turkish National Education, which are determined according to our constitution, Basic Law of National Education, Development Plans and Government Programs, are taken as the basis.

Ataturk has founded our Republic with the understanding of "National State". This understanding has been reflected in all of our constitutions as in the constitution of today. For this reason, it is not possible to define our educational system with any qualifications other than being "NATIONAL".

The Turkish National Educational System consists of two main sections; one is Organised Education and the other is Diffused Education. Organised Education includes the institutions pre-school basic training, secondary education and higher education. Diffused Education is the type of education towards our citizens who have not attended education after elementary school or who have quit the institutions of secondary education and started to work. The objectives of this education are to train

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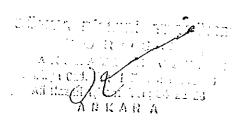
them better as apprentices, qualified workmen and masters, to facilitate their employment and to make them better citizens.

The two points of weight of the organised education consist of general education, and vocational and technical education. Necessary weight has been given to vocational and technical education since the foundation of our Republic and in particular during the planned period of development. However, since this area of education requires extensive investments, the development in this area can be within the possibilities of the investment budgets. Nevertheless, significant developments have been recorded in this area.

Activities are under way to give weight to primarily vocational and technical education and to gradually increase the rate of schools in the secondary education in a way that vocational and technical education will gain more importance.

Our oljectives with the vocational and technical education are to train the qualified manpower required by Turkey. to equip our youth with know-how and to make

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them have professions. Thus, it will be possible to prevent our youth from gathering in front of the Universities and, at the same time, to train the intermediary qualified technical personnel required by our industry.

Metin Emiroğlu Minister of National Education, Youth and Sport

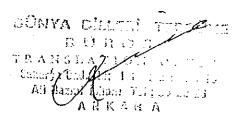
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MINISTRY OF NATIONAL EDUCATION YOUTH AND SPORTS ACTIVITIES OF THE DIRECTORATE GENERAL OF TECHNICAL EDUCATION FOR MEN

This book comprises the followings:

- 1- DUTIES OF THE DIRECTORATE GENERAL OF TECHNICAL
 EDUCATION FOR MEN
- 2- THE EXISTENCE SITUATION OF THE SCHOOLS OF INDUSTRIAL TECHNICAL EDUCATION
 - a- Kinds and numbers of schools
 - b- Kinds, numbers and applications of programs
 - c- Number of students and teachers
 - d- Equipment situation
 - e- Textbooks
 - f Investment budgets
 - g- Inter-service education activities
 - h- Revulving fund studies
- 3- DEVELOPMENT AND PREVALENCE STUDIES OF INDUSTRIAL TECHNICAL EDUCATION

a- Population in the period of secondary education and the education goal.



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- (1) Number of students attending to General High Schools and Vocational and Technical High Schools.
- (2) The goal and the number of students in 1995 shown in the Development Plan.
- b- The measures taken to prevent crowds in front of the University doors and to make students acquire professions.
- c- Other works to acquire profession to 650.000 persons in the direction of the Development Plan, that 150.000 of them'is at industrial felds.
- d- Increasing of quality in Vocational education.
 - (1) Increasing of quality and number of teachers.
 - (2) Developing of education programs.
 - (3) Putting the equipment to standart level.

4- PROBLEMS AND OUR OFFERS:

Fundamental Principles of Vocational and Technical Education :



- education in industry.
- b- Utilizing from FUNDS by the purpose of supporting budget possibilities.
- c- Improving of employment conditions of those who receive Vocational and Technical education.
- d- Increasing the number of the Workshop and Vocational course teachers.
 - e- Improving the employment conditions of the workshop and Vocational course teachers.
 - f- Application of the rearranged weekly course distribution schedules in the academic year of 1986-1987.
 - g- Organization structure

Schoolling situation and goals of our population at the age of secondary school and high school.

1- DUTIES OF THE DIRECTORATE GENERAL OF TECHNICAL

EDUCATION FOR MEN

The duties of our Directorate General of Technical Education for Men according to the Decrees in the force of Law, numbered 174, 179 and 208 are as follows:

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"Directorate General of Technical Education for Men is responsible from carrying out of all tasks and services concerning education and training of industrial vocational high schools, technical high schools, practical art schools and similar other schools at the same level.

In addition, it prepares plans and programs concerning the education and training, textbooks, auxiliary books, teacher guidance books, basic textbooks and knowledge work and process shects and submit them to the Education and Training Booard."

These duties are tried to be carried out by the units shown on the organization schema.

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GENERAL DIRECTORATE OF TECHNICAL EDUCATION FOR MEN ORGANIZATION SCHEMA

	HEAD OF DEPARTMENT	PERSONEL DIVISION	IN-SERVICE TRAINING DIVISION	INSPECTION AND EVALUATION DIVISION	STUDENT AFFAIRS DIVISION	
Secretary DEPUTY GENERAL DIRECTOR	HEAD OF DEPARTMENT	MANAGEMENT DIVISION (Exp.)	RESEARCH AND PROGRAMMING DIVISION	COURSE BOOKS AND TECHNICAL PUBLICATIONS DIVISION	EXPERT	
GENERAL	HEAD OF DEPARTMENT	BUDGET	INVESTMENT DIVISION (Exp.)	EDUCATION MEANS AND EQUIPMENT DIVISION	EXPERT	
DEPUTY GENERAL	HEAD OF THE PROJECTS DEPARIMENT	PLANNING DIVISION	EDUCATION-TRAINING DIVISION	PROCUREMENT DIVISION	FINANCIAL DIVISION	Darres Constant
						ANCH.

The fast developments taking place in science and techndogy in our age have caused the industry of our country to gain a multi-dimentional structure and the requirement for the qualified technical manpower has increased day by day accordingly. For this reason, the vocational and technical education has great importance in the development of our country.

In the schools and institutions which train the technical manpower required by our industry, we try to train our youth being bound to the revolution and principles of Atatürk, conscious of our great interests and defending these interests, full of love of country and national feelings and provided with professional and technical knowledge and know-how as well as immaterial and moral volves, with these objectives in mind and taking into consideration the objectives contained in the Basic Law of National Education and the ccirricula hased on this law, development plans and the Government Program, we are trying to:

- 1. Give sufficient speed to the Industrial technical education in the direction of the plan objectives
- 2. a- in partcular, cooperate with other institutions and organizations by kepping our schools and institutions open with all their facilities for the

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activities of providing professions for 690.000 persons, 150.000 of whom will be in the fields related to industry contained in Article 514 of the Fifth five year Development plan,

- b-. Provide vocational training for the students who cannot attend University,
- c- take the necessary measures to provide the professional persons with certificates or diplomas in their fields,
- d- Maintain our schools ready for service in combating unemployment,
- 3. train personnel with the qualifizations required by the industrial sector,
- 4. in the realization of vocational training, make use of the facilities of private sector, by keeping the Government facilities at a certain level.

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- 2. EXISTENT SITUATION OF OUR INDUSTRIAL TECHNICAL EDUCATION SCHOOLS
 - a. SCHOOL KINDS AND NUMBERS (Table-2)

A COMPANY OF THE PARTY OF THE P

TYPE OF SCHOOLS UNDER THE MANAGEMENT OF DIRECTORATE GENERAL OF TECHNICAL EDUCATION FOR MEN IN 1985-1986 ACADEMIC YEAR

- 1- Anatolia Technical High School
- 2- Technical High School
- 3- Anatolia maritime Vocational High School
- 4- Industrial Vocational High School
- 5- Industrial Practical Art School (Independent-Dependent)
- 6- Onganized Vocational Education for Adults
- 7- Technical Training Center for Adults.

ANATOLIA TECHNICAL HIGH SCHOOLS

Education is made in foreign Language for some courses in Anatolia. The education period is 5 years of which one year is preparatory class.

Education is made on COMPUTER SCIENCES, ELECTRONICS and JOURNALISM at these schools.

TECHNICAL HIGH SCHOOLS:

First years of technical high schools and industrial high schools are common. The education period of technical high school is 4 years. The students who show high performance during the first common year are able to attend this school.

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Technical high schools train students within 13 different technical programs.

ANATOLIA MARITIME VOCATIONAL HIGH SCHOOL

Education is made in foreign language for some courses in Anatolia Maritime Vocational High School. The education period is 4 years of which one year is preparatory class.

Education is made on DECK, MARINE MACHINES, SHIPS ELECTRONICS AND COMMUNICATION at this school.

INDUSTRIAL VOCATIONAL HIGH SCHOOLS

Education is made in 43 industrial fields at these schools of which education period is 3 years over the secondary school education.

ORGANIZED VOCATIONAL EDUCATION FOR ADULTS

Four different programs are available in a modular system to make gain professions to secondary and high school graduates who are late for regular education. In this kind of program, a success certificate is awarded to those who complete one module, and the diploma of industrial and vocational high school is awarded to those who complete all the modules.

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INDUSTRIAL PRACTICAL ART SCHOOLS

These schools train people who has a primary school diploma at least or quitted or graduated from secondary school by the purpuse of mating gain them professions in various 28 vocational fields with different periods and stages.

TECHNICAL TRAINING CENTERS FOR ADULTS

These are diffused education centers which aim to teach profession to the unemployed youngs who have primary school diploma and to give chance to those, who have professions, to develop their skills.

The number of these education centers, which are boarding schools, have been increased to 7 from 2 in 1985-1986 (TABLE:3).

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O COMPANY TO THE STATE OF THE STATE OF

TECHNICAL TRAINING CENTERS FOR BOARDING ADULTS WHICH ARE ESTABLISHED UNDER THE PROGRAM OF DIRECTORATE GENERAL OF TECHNICAL EDUCATION FOR MEN

Name of the School	1985-1986
and the state of t	quota
1. ADANA TECHNICAL EDUCATION CENTER FOR ADULTS	150
2. ADANA YEŞILEVLER TECHNICAL	
EDUCATION CENTER FOR ADULTS	50
3. BURSA ATATORK TECHNICAL EDUCATION CENTER FOR ADULTS	50
4. ISTANBUL SISLI TECHNICAL EDUCATION CENTER FOR ADULTS	90
5. ISTANBUL TUZLA TECHNICAL EDUCATION CENTER FOR ADULTS	50
6. ISTANBUL CATALCA TECHNICAL EDUCATION CENTER FOR ADULTS	50
7. IZMIR MERSINLI TECHNICAL EDUCATION CENTER FOR ADULTS	50

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28 technical programs are applied for 28 vocational fields at the Technical Education Centers for Adults by taking into consideration their vocation interests during their applications.

(TABLE:4)

Table: 4

THE PROGRAMS WHICH ARE APPLIED BY TECHNICAL TRAINING CENTERS FOR ADULTS

- 1- LEVELLING
- 2- TURNERY
- 3- MILLING
- 4- MOULDING
- 5- COLD METAL WORKS
- 6- OXY-ACETYLEN WELDING
- 7- ELECTRIC ARC WELDING
- 8- ENGINE WORKS
- 9- WOOD WORKS
- 10- FURNISHING
- 11- ELECTRICAL INSTALLATION WORKS
- 12- COIL WINDING
- 13- RADIO INSTALLATION
- 14- TECHNICAL DRAWING (Machine)
- 15- STONE STRUCTURE
- 16- MASONRY
- 17- PLASTERING, WHITEWASHING AND PAINTING

DUNYA DILLERÍ STEREINFORCING BLACKSMITHING
DUN DE DE STRUCTURE STONE CUTTING

20- TIMBÉR STRUCTURE

Kild in Katery

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- 21- CARPENTERY
- 22- JOINERY
- 23- TECHNICAL DRAWING (Structure)
- 24- SANITARY INSTALLATION
- 25- HEATING-VENTILATION
- 26- GENERAL PRINTING
- 27- COMPOSING AND PRINTING
- 28- AUTO ELECTRIC

The education has been carrying out by 5829 administrative workshop and vocational course teachers and
6167 general knowledge course teachers as of January
1986 for the training and education of 185,307
students at 1618 departments, in 169 vocational field
and in the following 516 schools which act under the
programs of our Directorate General in the academic
year of 1985-1986:

- 4 Anatolia Technical High Schools
- 1 Anatolia Journalism High School
- 1 Anatolia Maritime Vocational High School
- 100 Technical High School
- 342 Industrial Vocational High School
 - 14 Vocational Training Center for High School Graduates

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- 26 Organized Vocational Education Center for Adults
- 17 Dependent Industrial Proctical Art School
 - 4 Independent Industrial Practical Art School
- 7 Technical Education Center for Adults.

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THE SCHEDULE WHICH SHOWS PROGRAMS, SECTIONS
AND NUMBER OF STUDENTS AND TEACHERS IN 1985-1986
ACADEMIC YEAR AT SCHOOLS UNDER THE DIRECTORATE
GENERAL OF TECHNICAL EDUCATION FOR MEN

										The same of the same of		
SCHOOL TYPE	Sch.	Sect.	Total	NUMBER	. P	STUDENTS				Total	r. of	Nr. of
		Type	Section	Diff	Prep	IX.	×	XI.	×111.	Total	Teacher	Teacher
		(Nr. of		Educ	Sch.	Class	Class	Class	Class		of work	of Gen. Knowl.
		2	-					***************************************	<u></u>		Kocati.	Courses
								-			courses	
Anatolia Techni. High Sch.	4	2	4		96	100	96	_	1	292		
Anatolia Journal. High Scho.	٦	l	-	•	24		•	ı	1	24		
Anatolia maritime vocational			·							4 .		l
High School.		3	ັຕ	-	120	t	ŧ	. 1	ı	120		
Technical High School	100	13	171		ı	•	5.090	3.885	2.737	11.712		
Industrial Vocati. High Sch.	342	43	1367	•		74.889	52.293	44.510	1	171.692	5829	6167
Vocational Trai. of High	·					,			<u></u>			
School Graduates	14	w	17	269		-	1	_	-			
Organized Vocati. Training			:						4			 - -
Eduvation of Adults	26	17	-	23	i	-		-	-			
Industrial Practical Art												
School (Independent)	4	28	8	112	-	ŧ		-	-			
Industrial Practical Art School (Dependent)	17	28	34	840	1	ï	'	i	ı			
Technical Training Center	-	80		223	1	•						
CAN'S A'N' B'T O'T A'L	516	169	1618	1467	240	74.889	57.479	48.395	2.737	185:307	.5829	6167
TO NOT TO SOLVE TO SO	-	-	•	-	_							

The education and training of the schools above are carried out by support of 342 industrial vocational high schools and 4 industrial practical art schools as physical facilities, personnel and teachers.

Our schools are continibusly open to education by their buildings, installations, machinery, tools-materials, teacher, program and other facilities and activate by ther full capacities in general. In addition, they continue their production activities by their revolving funds at their workshops and laboratories besides their education and training.

b. KINDS OF PROGRAMS, THEIR NUMBERS AND APPLICATIONS

1- 3 and 13 training programs are applied respectively at various vocational field in Anatolia Technical High Schools and Technical High Schools (TABLE:6)

Table:6

PROGRAMS APPLIED IN ANATOLIA TECHNICAL HIGH SCHOOLS

- 1- COMPUTER SCIENCE
- 2- ELECTRONICS
- 3- JOURNALISM

PROGRAMS APPLIED IN TECHNICAL HIGH SCHOOLS

1- MACHINE

ELECTRICITY

- 3- ELECTRONICS
- 4- CONSTRUCTION
- 5- SUBSTRUCTURE
- 6- CHEMISTRY
- 7- ENGINE
- 8- TRAINING INSTRUMENTS
- 9- MICRO TECHNICS
- 10- COMPUTER OPERATION TECHNICIENSHIP
- ·11- INDUSTRIAL ELECTRONICS
- 12- MECHANICAL DRAFTING
- 13- STRUCTURAL DRAFTING
 - 2- 43 various kinds of programs are applied in Industrial Vocational High Schools (TABLE: 7)

Table: 7

23- CHEMISTRY
24- MINING
25- PRINTING
26- METALWORKS
27- METALLURGY
28- MODELLING
29- ENGINE
30- OFFSET
31- SANITARY INSTALLATIONS
32-WATER PRODUCTS
33- DECORATIVE STONECUTTING
34- TYPOGRAPHY
35- STRUCTURE

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14- SHIP ELECTRONICS AND COMMUNICATION 36- LEVELLING 37- STRUCTURAL DRAFTING 16- DECK HUNTING 38- PORCELAIN MANUFACTURING 17- CADASTRAL SURVEYING AND CERAMICS 39- LIBARIANSHIP 18- SPINNING 19- LABOUR-SAVING MACHINERY 40- HARBOUR MANAGEMENT 41- FURNITURE AND DECORATION 20- SMELTING 21- MOULDING 42- RESTORATION 43- TELECOMMUNICATION 22- MECHANICAL DRAFTING

(b) At various public and private sector organizations by signing protocol. (TABLE 8)

		Table:8
GH SCHOOLS BY PROTOCOLS SI	GNING WITH PUB	· ·
ORGANIZATIONS WITH	SECTIONS	PLACE OF SCHOOLS
Directorate General of Iron and Steel Operat- ions of Turkey	Smeltiny	Zonguldak-Karabül
Directorate General of Sümerbank	Textile (Weaving)	Adana-Merkez
Directorate General of Sümerbank	Textile (Weaving)	Adana-Merkez
	ORGANIZATIONS ORGANIZATIONS WITH NS WHICH SIGNED PROTOCOL Directorate General of Iron and Steel Operations of Turkey Directorate General of Sümerbank	Directorate General of Iron and Steel Operations of Turkey Directorate General Textile of Sümerbank Directorate General Textile

•			·
ACADEMIC YEAR	ORGANIZATIONS WITH		
IN WHICH BEGINS	WHICH SIGNED PROTOCOL	SECTIONS	PLACE OF SCHOOLS
TO BE ACTIVE			
1965.1966	Directorate General	sant from the	
	of Ereğli Iron and		
	Steel Operations		1
·	of Turkey	Smelting	Zonguldak-Ereğli
1000 1070			
1969-1970	Directorate General	Textile	August N. 1334
	of Sümerbank	(Spinning)	Aydın-Nazilli
1974-1975	Directorate General	Textile	
13/4-13/3	of Sümerbank	(Weaving)	Bursa-Tophane
	O1 Sumer bank	(neuving)	but sur topitalle
1974-1975	Directorate General	Metallar-	
	of Etibank	gy	Konya-Seydisehir
1976-1977	Directorate General		
	of Coal Operations		
	of Turkey	Mining	Kütahya-Tavsanlı
and the second		·	
1982-1983	Directorate General	Textile	
	of Sümerbank	(Weaving)	Kayseri-Centrum
1000 1006		Telecommu-	Nullana V-1.1
1983-1984	Directorate General	nication	Ankara-Yıldırım Beyazıt
	of PTT	nicación	beyazit
1983-1984	Directorate General	Telecommu-	
DÜNYA DİMERİ -		nication	İstanbul-Şişli
POWER PROPERTY		7 1	
1983-1984	Directorate General of	Shoemaking	
All Nachal Co.	Sümerbank		Van-E.P.S.O
ALKARA			,
· · ·	1		./

ACADEMIC YEAR IN WHICH BEGINS TO BE ACTIVE	ORGANIZATIONS WITH WHICH SIGNED PROTOCOL	SECTIONS	PLACE OF SCHOOLS
1983-1984	Directorate General		
	of Sümerbank		lstanbul-Beykoz
1985-1986	Chairmanship of Chamber of Trade	Textile (Spinning)	Gaziantep-Centrum
	and Industry of Gaziantep		
1985-1986	Directorate General	Téxtile	
	of Sümerbank	(Weaving)	Konya-Ereğli

- b) At schools and organizations of public and private sectors, as concentrated;
- c) At 14 schools, 17 vocational fields under the Vocational and Technical Training Project with cooperation of school and public and private sectors. (TABLE:9)

SECTIONS

Table:9

SCHOOLS AND SECTIONS IN WHICH VOCATIONAL AND TECHNICAL TRAINING PROJECT (METEP) IS APPLIED

ITEM

No.

NAME OF SCHOOL

Topphane Industrial

Vocational High School

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Levelling, Metalworks, wood works, Electricity, M. Drafting, Modelling Casting, Moulding, Weaving.

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ITEM		
No.	NAME OF SCHOOL	SECTIONS
2.	Izmir Mithatpasa Industrial Vocational High School	Levelling, Metalworks, wood works Electricity, M.Drafting, Modellin
3.	istanbul Kartal Industrial Vocational High School	Levelling, Metalworks, wood work Electricity, Electronics, M. Drafting
* *	Adana Centrum Industrial Vocational High School	Levelling, Metal works, wood work Electricity, Electronics, M.Drafting, Modelling, Casting Weaving, Spinning.
5 ·	Ankara Yenimahalle Industrial	Levelling, wood works, Electricit
•	Vocational High School	Electronics, M.Drafting,
6.	Ankara iskitler Industrial Vocational High School	Levelling, Metalworks, wood woorks Electricity, M.Drafting.
7.	Ankara Yıldırım Beyazıt Industrial Vocational High School	Levelling, Metal works woodworks, Electricity, M.Drafting, Telecom- munication
8.	Bolu Industrial Vocational High School	Levelling, Metalworks, woodworks, Electricity, Modelling, Engine.
ં ⁹ વઇ,	Balikesir Centrum Industrial Vocational High School	Levelling, Metalworks, Wood works, Electricity, M.Drafting, Engine
10	Azmir Atatürk (Karabağlar)	Levelling, Metalworks, Electricity,
	Industrial Vocational High	Electronics, Modelling, Casting.
	School	./.

ITEM		
No.	NAME OF SCHOOL	SECTIONS
11.	Istanbul Gültepe Industrial Vocational High School	Levelling, Metalworks, Electricity Electronics, M. Drafting
12:	istanbul (Sisli) Industrial Vocational High School	Metalworks, Engine, Electricity, Electronics
13.	Istanbul Printing Vocational High School	Typo Printing, Photography and Cliche, Offset Printing, Binding and Screen Printing, Composing
14.	Istanbul Textile Vocational High School	Weaving, Spinning, Dye-Finish.

VOCATIONAL TRAINING OF HIGH SCHOOL GRADUATES

Our 14 schools, in which Vocational and Technical Training Program is applied under the program of our Directorate General, have begun to the concentrated vocational training of high school graduates beginning from 1985,1986 academic years by the purpose of making gain professions to high school graduates under the goals of the Fifth Five-Year Plan of Development and the Government. (TABLE:10)

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SCHOOLS AND SECTIONS IN WHICH VOCATIONAL TRAINING IS
APPLIED BY THE PURPOSE OF MAKING GAIN PROFESSIONS TO
HIGH SCHOOL GRADUATES

I TEM	NAME OF SCHOOL	SECTIONS
1.	Bursa Tophane Industrial Vocational High School	Levelling, Metalworks, wood works, Electricity, M.Drafting, Modelling, Casting, Moulding, Weaving.
2	Izmir Mithatpasa Industrial Vocational High School	Levelling, Metalworks, Wood Works Electricity, M.Drafting, Modelling.
3.	Istanbul Kartal Industrial Vocational High School	Levelling, Metalworks, Wood works, Electricity, Electronics,
4.		Levelling, Metalworks, Wood works Electricity, Electronics, M. Drafting Modelling, Casting, Weaving, Spinning
5.	Ankara Yenimahalle Industrial Vocational High School	Levelling, Woodworks, Electricity, Electronics, M. Drafting.
6.	Ankara Iskitler Industrial Voca- tional High School	Levelling, Metalworks, Wood works Electricity, M.Drafting

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By evaluating the knowledge of the high school graduates gained in the schools from which they have graduated, and by exempting them from the general courses of science those who succeed in the application of the theoretical courses of the technical program which they wish to attend and applied courses in three terms of 16 each in the form of blocks of 52 hours per week are entitled for the diploma of Industrial Vocational High School.

In addition, with the purpose of providing with professions with the graduates of secondary schools and high schools who are too old to attend the institutions of higher education, training is supplied in the modular system in (4) different types of programs.

The one who completes one module in one type of program gets the certificate and the who completes all the modules gets the diploma of Industrial Vocational High School.

APPLICATION OF THE ORGANISED EDUCATION:

As you know, the vocational and technical education is an expensive type of education. The machinery, equipment and materials used in this field are expensive. In addition, the applications require special training environment.

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In the curricula applied in our schools, the objective is to provide the students with the knowledge and know-how requiled by the working life. However, those students who did not have sufficient conract with the industry during their education have difficulty in adjusting themselves to their jobsites following their graduation.

For this reason, moving from the principle that the jobsites in the industry are an extention of our schools, the application of the intensive education was started in the Industrial Vocational High schools in the academic year of 1985-1986 in order to systematically establish tha relation between the school and jobsite...

The organized education is offerred by dividing the courses contained in the table of weekly distribution of the courses of the Industrial Vocational High School into two blocks as:

- a. General courses of science in one block
- b. Workshop and vocational courses in another block and by intensifying them to the number of hours in the type of the application determined by the school.

This application is carried out on the block basis and in accordance with the building, teacher, personnel, environmental and industrial facilities of the school and also taking into consideration the courses on the table of weekly distribution of courses and the calendar of the annual working, as:

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- a. Weekly
- b. Biweekly
- c. Quadruple weekly
- d. Eight weeks
- e. Sixteen weeks
- f. Thirty-two weeks

The workshop applications of the IXth and X th grades are carried out in the workshops of the school and the workshop applications of the XI th grade are carried out in the workshop of the school as well as in the public and private institutions and education.

In the application of organised education in our schools effering industrial education:

- In particular, continuity has been provided in the workshop applications.
- 2. School-Jobsite relations have been established since the workshop hours are in the form of blocks.
- 3. Students can concentrate in the Job better since there is continuity in the block education.
- 4. The losses of the workshop hours have been minimized since the workshop applications are in the form of blocks.

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- 5. The most efficient use is made of the physical capacity since the administration of the school can casily organize the distribution of classrooms and workshops.
- 6. The absence of students without excuse has been reduced.
- 7. The guidance and training branch studies are more efficient since they are performed in blocks.
- 8. Teachers and students can use the expensive machinery, equipment and materials which are not available in our schools.
- 9- Information flow has been realized between school and workplace by means of trainers.
- 10. The possibility of contributing to vocational and technical training has been provided for workplaces.

c. NUMBER OF STUDENTS AND TEACHERS

185.307 students are trained by 5829 teachers in the industrial technical schools of our Directorate General in 1985-1986.

The entrance to our schools are realized by examinations since the crowd of the studens apply

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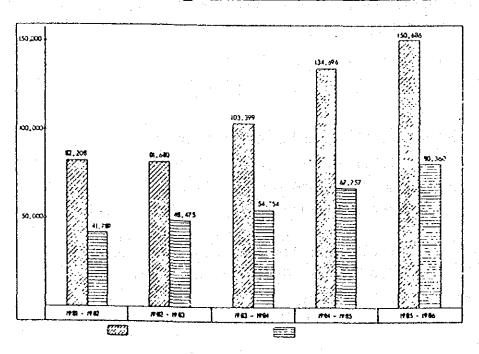
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The number of students, who attend to these schools, has increased to 185.307 from 105.000 during the last five-year period and only half of the students who apply to the schools are able to be accepted. (TABLE: 11)

(Table:11)

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NUMBER OF STUDENTS WHO APPLY AND ARE ACCEPTED TO THE INDUSTRIAL VOCATIONAL HIGH SCHOOLS OF THE DIRECTORATE GENERAL OF TECHNICAL EDUCATION FOR MEN



Number of students who apply

Number of Students accepted

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In spite of the increasing number of the students by each year, the insufficiency of the number of the workshop and vocational course teachers stops meeting of the students training demands.

d. EQUIPMENT SITUATION

The schools under our Directorate General show activity by the purpose of meeting the manpower requirement of the industrial fields.

So, to provide the harmony of the graduates to work life, the training conditions of the schools should be the same of the work life.

Most of the machinery and equipment exist in our schools are the ones which have been provided during the foundation of the schools. So, the development and changing of these machinery with the ones suitable to the latest technology have not been realized.

The machinery and equipment in the workshops are used in the production activities in the revolving capital establishment in addition to the training activities. Thus, students are frained in a way that facilitates their adaptation to the working life and at the same, contribution is made to our national economy.

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The machinery and equipment requirements of our schools are met by:

- 1) The supplies which cannot be purchased by the newly opened schools and sections and the present schools in their locales and which are purchased abroad or domestically and sent to the schools by the Department of Training Equipment and Supplies in accordance with the pre-determined standards,
- 2) allocations to purchase some of the equipment and materials in their locale.

It is planned that 60% of the 1.900.000.000 TL which is allocated in the budget to equip our schools in the 1985 fiscal year will be used for the purpose of equipping the newly-opened schools and sections and the remaining 40% for the purpose of supporting the present schools with new machinery.

A seperate briefing text has been prepared on renting machinery and equipment abroad or domestically in accordance with the provisions of the Financial Renting Law in the 1986 fiscal year.

e. TEXTBOOKS

If has been determined thort 369 kinds of basic tex (books, work and procedure sheets and teacher's handbook

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are required for the vocational courses offered in our schools. Of these books, a total of 145 books, consisting of 93 basic textbooks, 45 work and procedure sheets and 7 teachers handbook, has been written and published by our Ministry and they are, at present, used in our schools.

Of the 224 books required by our schools affiliated with our General Directorate within the book writing mobilization mitiated by our Ministry, the publication procedure of 4 books and review procedure of 18 books are under way.

The writing procedure of the remaining 202 books has been planned in a way that it will be completed by the end of 1987. (Table 14).

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- 3- THE DEVELOPMENT AND EXPANSION ACTIVITIES OF THE INDUSTRIAL TECHNICAL EDUCATION
 - a. THE STATUS AND TRAINING OBJECTIVE OF THE POPULATION OF THE SECONDARY EDUCATION AGE

In the academic year of 1985-1986, the age population in the 15-17 age group was 3.3 million and 1.000.000 students, about 30% of this population are trained in schools.

18% of our 3.3 million youths at the age of high school is trained in the general high schools and 12% in the Vocational and Technical High Schools.

About half of the students attending the institutions of vocational and Technical High schools affiliated with our General Directorate.

The Fifth five year Development Plan has aimed at training, at the end of the plan period, 39.4% of our youths at the age of high school in the intensive training system in a way that 18.8% of these students will be trained in the general high schools and 20,6% in the Vocational and Technical High schools.

If we assume that the age population will be about 3,5 million in the next four years and that half of those who will attend vocational and

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technical education will attend the schools affiliated with our General Directorate, this objective necessiates the review of the plans previously made because of the fast increase in the age population.

Accordingly, on the academic year of 1988-1989, measures have to be taken now in order to train about 300.000 students in the schools affiliated with our General Directorate.

b. MEASURES TAKEN IN ORDER TO PREVENT CATHERING IN FRONT OF THE UNIVERSITIES AND TO PROVIDE THE YOUTH WITH PROFESSIONS.

Only about 400.000 of about 4.000.000 youth at the age of university can attend universities.

About 300.000 students graduates from the schools of secondary education every year, about 1/3 of these students can attend universities and the remaining 2/3 direct themselves to the working life.

120.000 persons, that is, 60% of the 200.000 persons who have directed them selves to the working life, have completed the general high school education and have to find jobs and work without any vocational training.

By taking a measure, our Ministry has started to implement two different types of programs to train in our schools the persons who have completed the high school education, but are too old for apprenticeship.

These applications have been presented under the title of "the types and numbers of the programs, and applications".

Our activities are under way to expand the application of training directed to cause the high school graduates to get vocational high school diplomas in one year to the industrial vocational high schools other than the 14 schools, where vocational technical training project is applied.

c. OTHER ACTIVITIES TO PROVIDE 650.000 PERSONS WITH PROFESSIONS, 150.000 BEING IN THE INDUSTRIAL FIELDS, IN THE DIRECTION OF THE OBJECTIVES OF THE DEVELOPMENT PLAN:

Our General Directorate has also given importance to and specded up its activities in expanded training in order to provide 650.000 persons with professions, 150.000 being in the industrial fields in the direction of the objectives of the Fifth Five Year Development Plan.

For this purpose, the training of the Industrial Practical Art Schools within the structure of the Industrial Vocational High schools has been expanded and the number of Technical Training Centers for Adults has been increased.

In addition, Vocational courses are arranged by cooperating with various institutions and organizations in order to make employable the youth who have secondary education but cannot find jobs, by training them in the fields required by the productive sector of the economy.

- d. IMPROVEMENT OF THE QUALITIES OF THE NOCATIONAL EDUCATION
 - Improving the qualities and increasing the number of teachers;

The qualified training in our schools and the training of the qualified manpower based on this will be possible by the qualified teachers who will carry out these services.

The foundation of the educational system is the teacher. For this reason, an educational system can only be successful with the knowledge, capacity and excitement of the teacher. In short, what the

teacher is what the school is.

For this reason, it is useful to take the necessary measures in training teachers in respects of both number and qualities.

Preliminary studies have been started concerning this matter between our Ministry and the Faculties of Technical Education which train teachers for our schools.

If is not possible to increase the number of teachers in paraflel to the fast increase in the number of students in our schools of industrial technical education and this case appears to be a problem.

More detailed in formation will be presented on increasing the number an cimproving the conditions of the teachers in the section under the title of "Our problems and suggestions".

2- Development of Educational Programs

Today, industry and technology are changing and developing rapidly, our institutions, which train people in order to meet the requirements of medium level technical manpower of the industrial fields, must keep in step with these changing cenditions.

 For this purpose, as we have also presented in the in-service training activities, the teachers in our schools are trained in a way that they will gain the qualities of both following up the technological developments and developing programs.

The educational programs and textbooks are reviewed by the teachers who have participated in these studies and educational programs are prepared for the required fields.

3- Improvement of supplies to the standard level:

Workshops and laboratories which are equipped with the machinery, equipment and materials contorming to the educational programs and technological developments of today are required to provide the students with the knowledge and know-how at the required level in our schools and to adapt them to the working fields.

For this purpose, activities are being carried out by the Department of projects set up within the structure of our General Directorate for providing the machinery, equipment and material requirements of some of our schools.

In order to equip our schools by providing support to the budgetary possibilities and to improve the level

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of education, projects are being prepared and some of these projects have been applied. The following projects have been applied up to now.

- 1- "Project of industrial schools" with the World Bank,
- 2- EBOEM "Maintenance and Repair Project of Electronic Madical Equipment".
- 3- "Regional Development Project" with Baden würtenberg state Federal Germany.

In addition, the following projects have been prepared and submitted to the related Governments and they are being followed:

- 4- "Development Project for the Vocational and Technical Education" offered to the Saudi Development Fund,
- 5- "Technological Cooperation Project" offered to the Government of Japan,
- 6- "Project of cooperation in the fields of electronics, pneumatics and hydraulics" offered to Baden würtenberg State of Federal Germany,
- 7- "Project of cooperation in Education" with Federal Germany. Preparatory activities are being carried out for the following projects:
- 8- Within the framework of the participation program of UNESCO for 1986-1987:

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- a. Training of teachers in the field of leather
- b. Training of teachers in the field of shoemaking
- c. Training of teachers in the field of computer training
- d. Provision of materials and equipment in the field of Map and Cadaster training.
- 9. "Technical Aid Project" with the Government of Italy of these projects, the project document of "the project of Industrial Schools", to which the World Bank is a party, has been prepared and this project was signed by the parties on May 29,1985 after it was evaluated by the authorities of the World Bank (International Reconstruction and Development Bank), published in official paper on July 8,1985 and entered into force on July 19,1985. The objective of the project is to improve, both in quality and quantity, the equipment, materials, teachers and printed materials of the vocational and technical schools at the secondary level. The amount of the foreign credit provided is U.S. \$ 57.7 million.

If has been planned within the scope of this project that 95 teachers of workshop and Professional courses and directors will be traned abroad to conform to the developing technology.

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The workshops and laboratories of the 39 schools affiliated with the General Directorate of Technical Education for men will be equipped (Table 23, a-b-c-d-e-f-g)

About 50 textbooks which are used in the western countries and which we will use in the transfer of technology will be translated into Turkish and published.

The activities realized on this matter in 1985 are the following:

- The tender documents concerning the technical aid were prepared and sent to the World Bank.
- 2) The firms which will participate in the tender of the technical aid of the project were selected.
- 3) The technical aid package was prepared by concluding a centract with the firm concerned.
- 4) The tests and interview examinations of the teachers who will be sent abroad for training and who will learn English were carried out and the seletion of 90 teachers was concluded and the course was started in January 1986.
- 5) The English Language Training of the teachers who will be sent abroad for training was tendered to the English cultural Association and the training was started.

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- 6) The objectives and principles of activity of the project was publicized to the world by being advertised in some publication organs published abroad.
- 7) The objectives and principles of activity of the project was publicized to the Turkish people by being published in official paper and two newspapers.
- 8) Some of our educational institutions were visited and studied with an experts group of 7 persons from the World Bank and the preliminary discussions were completed to implement new projects on this matter.

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SCHOOLS INCLUDED IN THE INDUSTRIAL SCHOOLS PROJECT AND WORKSHOPS AND LABORATORIES TO BE EQUIPPED

Item	School (Code Name of School	Workshop and Laboratories
No.			To be Equipped
INDUS	STRIAL VOC	CATIONAL	
HIGH	SCHOOLS		The state of the s
1	01,01	Adana Centrum	Ol. General Electronics
			08. Phönometic and Ind. Hydrauli
•			10. Numeral Lathes with Numerica
	**		and computer control
			15. Electricity
			16. Training Instruments Units
			17. Basic Technology Lab.
			18. Static and Dynamic Lab.
	•		19. Fluid mechanics and Thermo-
			'dynamic Lab.
			20. Material Lab.
2	02.0	Adıyaman	01. General Elektronik
			15 Electricity
			16.Training Instruments Units
		,	17.Basic Technology Lab.
	•		18. Static and Dynamic Lab.
3	06.01	Ankara/Aktas	Ol.General Elektronik
			13.Casting and Casting Lab.
			14.Printing
			15.Electricity
•			16.Training Instruments Units
			17.Basic Technology Lab.
			18.Static am Dynamic Lab.
			20. Material Lab.
		the contract of the contract o	

"Measuring Technicianship" 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 19. Fluid mechanics and Thermodynamic Lab. 20. Material Lab. 5 05.03 Ankara/Kırıkkale 01. General Electronics 08. Phönometic and Ind. Hydrau	10.	**************************************	To be Equipped	
02. Industrial Electronics 11. Control and Instrumentation "Measuring Technicianship" 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 19. Fluid mechanics and Thermodynamic Lab. 20. Material Lab. 5 06.03 Ankara/Kırıkkale 01. General Electronics 08. Phönometic and Ind. Hydrau		IONAL		
11. Control and Instrumentation "Measuring Technicianship" 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 19. Fluid mechanics and Thermodynamic Lab. 20. Material Lab. 5 06.03 Ankara/Kırıkkale 01. General Electronics 08. Phönometic and Ind. Hydrau	4 06.02	Ankara/Balgat	01. General Electronics	
15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 19. Fluid mechanics and Thermodynamic Lab. 20. Material Lab. 5 05.03 Ankara/Kırıkkale 01. General Electronics 08. Phönometic and Ind. Hydrau			11. Control and Instrumentation	
18. Static and Dynamic Lab. 19. Fluid mechanics and Thermodynamic Lab. 20. Material Lab. 5 05.03 Ankara/Kırıkkale Ol. General Electronics 08. Phönometic and Ind. Hydrau			15. Electricity	
20. Material Lab. 5 06.03 Ankara/Kırıkkale 01. General Electronics 08. Phönometic and Ind. Hydrau				
08. Phönometic and Ind. Hydrau				
and the fluorest of the state o	5 06.03	Ankara/Kırıkkale	· ·	

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Item No.	School (Code Name of School	Workshop and Laboratories To be Equipped
			16. Training Instruments Units 17. Basic Technology Lab.
			18. Static and Dynamic Lab. 19. Fluid mechanics and Thermo-
			dynamic Lab.
			20. Material Lab.
6	06.04	Ankara/Yıldırım	Ol. General Electronics
		beyazıt	15. Electricity
		· · · · · · · · · · · · · · · · · · ·	04. Telecommunication
			16. Training Instruments Units
			17. Basic Technology Lab.
			18. Static and Dynamic Lab.
7	10.01	8=1-kacin/100 V-1	20. Material Lab. 01. General Electronics
′	10,01	Balikesir/100.Yil	13. Casting and Casting Lab.
		•	15. Electricity
			16. Training Instruments Units
	•		17. Basic Technology Lab.
			18. Static and Dynamic Lab.
			20. Material Lab.
8	16.01	Bursa/Tophane	12. Moulding
·	10.01	out suf tobilatie	13. Casting and Casting Lab.
			16. Training Instruments Units
			17. Basic Technology Lab.
	* .		18. Static and Dynamic Lab.
		•	20. Naterial Lab.
9	21.01	Diyarbakır	01. General Electronics
		, 5 13 41 4 41 11	15. Electricity
			16. Training Instruments Units
			17. Basic Technology Lab.
			18. Static and Dynamic Lab.
	i		20. Material Lab.
10	24.01	Erzincan	01. General Electronics
			05. Electricity
			16. Training Instruments Units
			17. Basic Technology Lab.
		•	Static and Dynamic Lab.
	05 01		20. Material Lab.
11	25.01	Erzurum/Atatürk	01. General Electronics
			15. Electricity
			16. Training Instruments Units
			17. Basic Technology Lab.
			18. Static and Dynamic Lab.

Table-23/c ...

Item No.	School Cod	e Name of School	Workshop and Laboraton To be Equipped
12	27/01	Gaziantep/II	01. General Electronics 07. Cooling and Ventilating 08. Phonometic and Ind. Hydraulic
			 12. Moulding 13. Casting and Casting Lab. 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 19. Fluid mechanics and Thermodynamic Lab. 20. Material Lab.
13	32.01	Isparta	Ol. General Electronics 13. Casting and Casting Lab. 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
14	34.01	tstanbul/Avcılar	Ol. General Electronics 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
15	34.02	1stanbul/Küçükköy	Ol. General Electronics 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
16	34.03	Istanbul/Ortaköy D.	03. Ship Electronics 05. Deck 16. Training Instruments Units 17. Basic Technology Lab.
17	34.04	İstanbul/Şişli	Ol. General Electronics O4. Telecommunication 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab.
18.	34.05	îstanbul/Tekstil	09. Textile-Paint Finishing Proce 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab.

Table-23/d

Item No.	School Co	de Name of School	Workshop and Laboratories To be Equipped
19	34.06	1stanbul/Tuzla	Ol. General Electronics 12. Moulding 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab.
20	34.07	İstanbul∕Omraniye	Ol. General Electronics 13. Casting and Casting Lab. 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
21	34.08	istanbul/Yakacık	01. General Electronics 07. Cooling and Ventilating 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab.
22	34.09	Istanbul/Zeytirburn	nuOl. General Electronics 12. Moulding 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
23	35.01	Izmir/Buca	Ol. General Electronics O4. Printing office 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
24	36.01	Kars	01. General Electronics 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
25 	41.01 Dinani 5	. Kocaeli/Gölcük ♥cömg	03. Ship Electronics 12. Moulding 15. Electricity

Item No.	School	Code Name of School	Workshop and Laboratories To be Equipped
•			16. Training Instruments Units17. Basic Technology Lab.18. Static and Dynamic Lab.20. Material Lab.
26	42.01	Konya/Centrum	07. Cooling and Ventilating 08. Phönometic and Ind. Hydraulic 10. Numerical Machine Tool with computer Control 12. Moulding 14. Printing 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 19. Fluid mechanics and Thermodynamic Lab. 20. Material Lab.
27	44.01	Malatya/\$K℧	Ol. General Electronics 10. Numerical Machine Tool with computer Control 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
- 28	46.01	K.Maraş	Ol. General Electronics 10. Numerical Machine Tool with computer Control 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
29	52.01	Ordu	01. General Electronics 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
30	55.01	Samsun/Centrum	13. Casting and Casting Lab.16. Training Instruments Units17. Basic Technology Lab.18. Static and Dynamic Lab.20. Materials Lab.

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Item No.	School Code Name of School	Workshop and Laboratories To be Equipped
31	55.02 Samsun/Atakum	01. General Electronics 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab,
32	58.01 Sivas	Ol. General Electronics 12. Mouldung 13. Casting and Casting Lab. 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
33	65.01 Van	Ol. General Electronics 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
34	66.01 Yozgat/Yerköy	Ol. General Electronics 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
35 (67.01 Zonguldak	Ol. General Electronics 13. Casting and Casting Lab. 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
ANATOL	IA TECHNICAL HIGH SCHOOLS	
36 (06.05 Ankara/Yenimahalle	O1. General Electronics O6. Computer Sciences 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
GAVA 6	34:10 TBEANGUI/Haydarpasa	Ol. General Electronics O6. Computer Sciences O8. Phönometic and Ind. Hydraulic lO. Numerical Machine Tool with computer Control

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Item No.	School Co	de Name of School	Workshop and Laboratories To be Equipped
			12. Moulding 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 19. Fluid mechanics and Thermodynamic Lab. 20. Material Lab. 22. Medical Electronics
38	34.11	tstanbul/Macka	Ol. General Electronics O6. Computer Sciences 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.
39	35.02	fzmir/Çınarlı	01. General Electronics 06. Computer Sciences 15. Electricity 16. Training Instruments Units 17. Basic Technology Lab. 18. Static and Dynamic Lab. 20. Material Lab.

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4. PROBLEMS AND OUR SUGGESTIONS:

Weight and importance have been given in the Republican period to our vocational and technical education, which has a long history. Allocations have been made from the Governmental Budget to set up these schools in almost every settlement area in our country, whose population is over 15.000 and a network of 342 industrial vocational high schools has been established in our country.

These installations, the smallest of which means a value of about 1 billion TL, with its lot, building, machinery and equipment 90 on to serve, with their qualities of school and establishment, by both the training and educational activities and production activities carried out for the purpose of supporting the training activities.

The vocational and technical education should be developed and some bottlenecks overcome in accordance with its basic principles in order to make the activities of our institutions more effective and useful.

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THE BASIC PRINCIPLES OF THE VOCATIONAL AND TECHNICAL EDUCATION:

- (1) Vocational and technical education should be planned in both quality and quantity to respond the manpower requirement of the working life.
- (2) The programs of vocational and technical education should be developed in a way that they will respond the requriements of the individuals and working life.
- (3) Professional guidance services should systematically beprovided for the students for a vocational education system which operates effectively.
- (4) The training environment in the vocational and technical training should conform to the real working environment.
- (5) In the vocational and technical education, the training and educational services should be carried out the teachers trained in accordance with the characteristics of the service.
- (6) The teachers of the workshop and professional courses in the institutions of the vocational and Technical education should have sufficient work experience in their field of teaching.
- (7) The teachers of the institutions of vocational and technical education should be subjected to a continuous and extensive in-service training in order

- to adapt them to the screntific and technological developments.
- (8) The administrative and supervisory services of the vocational and Technical Education should be carried out by specially trained personnel
- (9) The vocational and technical training should continuously be developed on the basis of researches.
- (10) The working life should participate in the planning of the vocational and technical training at national, regional and local levels.
- (11) The vocational and technical education should be initiated when the minimum financing requirement is met.
- (12) The training equipment and materials necessary for the vocational and technical education should be determined in accordance with the objectives planned to be attained.
- (13) The vocational and educational education should be organized conforming to the whole educational system and in accordance with the characteristics of the service to be performed.
- (14) The effect of the vocational and educational education should be determined by taking into consideration the educational objectives and the achievement in the work of the manpower trained by it.

DÜNYA DILLERI Edit Ja Luk Ibn 1 Kirikakmi Işhacı Fulla A N K A K A We will present under 7 headings the bottleneck which we today encounter in developing our institutions in accordance with the basic principles of the vocational and technical education submitted above and in making their activities more useful and effective.

These are the following in order:

- a. The preparation of the necessary legislation for training in the industry
- b. Making use of the funds in order to support the budgetary possibilities.
- c. Improvement of the employment conditions of those who have had vocational and technical education.
- Increasing the number of the teachers of the workshop and professional courses,
- e. Improvement of the employment conditions of the teachers of the workshop and professional courses.
- f. Application in the academic year of 1986-1987 of the weekly distribution tables of courses re-arranged.
- g. The structure of the organization.

a. THE PREPARATION OF THE NECESSARY LEGISLATION FOR TRAINING IN THE INDUSTRY

The fact that the increase rate of population is 2.785%, according to the census carried out in our country in 1985 has shown the necessity of increasing more the number of manpower that has to have vocational and technical education and the investment in this area.

Diffaculties are encountered in making the necessary investments and in cooperating with the industrial plants and establishments in the field of training with the allocations from the budget of our ministry. There are sometimes problems in the training practices carried out in the establishments with limited good relations since there is no legal basis on this matter.

In many European countries, the vocational training is carried out jointly by the Government, employers and workers. The vocational training is financed by those who make use of the training (workers) and by those who employ (ekployers).

In some countries, institutions make allocations to the training expenses from their incomes or profits or a certain percentage on the basis of the salaries they pay to workers.

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The institutions or organizations carrying out the training activities deduct these expenses from the shares allocated for training. In addition, the funds reveived from the organizations which do not carry out training activities are used to financially support the organizations which carry out training activities.

In our country, we also need to make the legal arrangements which will enable to apply the vocational and technical education in both the establishments owned by the public organizations and in the plants and establishments owned by the private sector.

An important step was taken by the Law No.3457 on the Arrangement of vocational courses in the Industrial organizations and mining quarries passed during the carly years of the Republic (in 1938, when there was not yet industry at sufficient level in Turkey).

The Basic Law No.1739 of National Education has the following provisions:

Article 17: "Effort is made to realize the objectives of national education not only in the public and private training institutions, but also at home, in the environment, establishments, everywhere and on every occasion."

Article 42: "Legislation should be prepared which coordinates the activities of the public, private and voluntary organizations active in the area of general and Vocational technical Extensive training."

In order to carry out vocational training in the industry which is considered to be the extention of our schools, if is necessary to prepare new legislation covering:

- a. carrying out training in cooperation with the school in the public establishments which employ a certain number of workers,.
- b. Implementation of compulsory employment of the students for practical training by the private institutions which employ more than a certain number of workers.
- c. provision by the Government of the insurance costs against the work accidents and professional diseases of the students who will have practical training in the establishment.

With this legislation to be prepared, in particular, the obligation of employers either to contribute to the vocational training or to train students in their establishments will be a long term and real solution to the bottleneck on this matter.

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The "Bill on the Vocational and Technical Education" prepared for this purpose has been presented in the addendum to this document.

b. MAKING USE OF THE FUNDS IN ORDER TO SUPPORT THE BUDGETARY POSSIBILITIES:

New physical capacity should be created for more than 20.000 students who should have intensive vocational and technical education every year to attain the plan objectives. In addition, necessity exists for the insfallations where the persons who have graduated from general high schools and who cannot attend the institutions of higher education and cannot get employment will also have vocational training.

The vocational training of certain standard in these installations can be providing by equipping them with suitable machinery, equipment and materials. In addition, the present schools have to be supported with suitable machinery in paralell to the developing technology.

When the budgetary possibilities are studied, it is seen that only half of the allocation needed to purchase machinery, equipment and materials, and investment to cheate the physical capacity of 10.000 students every year can be met, and that the deficit is mereasing more and

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more. Other possibilities and sources have to be provided to eliminate this deficit and improve the quality of education.

In order to reach to the objectives specified in the Government programs and development plans, an average of 30 Industrial Vocational high schools has to be established every year, these schools to be equipped and their teacher requirement has to be met; in addition, the present schools have to be supported by equipment, materials and teachers.

As a long term and real solution on this matter, this problem will have been solved with the establishment of the "Supporting fund for the vocational training."

C. IMPROVEMENT OF THE EMPLOYMENT CONDITIONS OF THOSE WHO HAVE HAD VOCATIONAL AND TECHNICAL EDUCATION

Article 4 of the Basic Law of National Education has the following provision:" the development of National Education is planned and realized in a way that it will give weight to the vocational and technical education which will provide the technological development necessary for modernization in industry and agriculture, taking into consideration the training-manpower-employment relations in contormity with the economical, social and cultural objectives of development.

The levels of the professions, and the title, competence and resposibilities of each level are determined by law and the organization and programs of the intensive and extensive vocational training in each level and type are prepared in accordance with these levels."

Today, the professional levels, titles, competence and responsibilities are applied in different ways in the working life.

These titles are technologist, Mechanic, technician, foreman, etc. However, there is no regulations on whom these titles will be assigned and how they will be assigned.

In case this gap in the working life is filled by legislation, the duties, competence and responsibilities of the employees will have been determined and their employment will have had a sound structure.

Vocational training conforming to the qualities of the job should be required for the employment in all the establishments, primarily in the public establishments. Thus, the investment in the vocational training will be valuated in the production of commodities and services more praductive and with better qualities in the working life.

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This problem will also have been solved with the passing of "the bill on being technologist, higher mechanic, mechanic and technician" which is at Present in the National Education Commission of the Congress of Turkey and on which studies are under way.

d. INCREASING THE NUMBER OF THE TEACHERS OF THE WORKSHOP
AND PROFESSIONAL COURSES

As of the academic year of 1985-1986, there is need for teachers in various branches

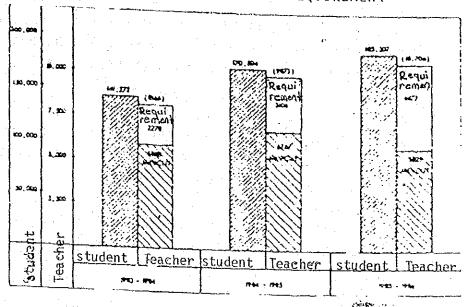
The requirement of teachers increases to 5.000, also taking into consideration the vocational training of the high school graduates and adults (Table 24).

This requirement should be met by:

- (1) accepting more students to the Technical Training Fauilties,
- (2) the return of the technical teachers who have retired or left teaching by providing them with the cadres suitable for their conditions,
- (3) Taking the necessary measures to employ engineers as teachers,
- (4) Provision of cadres for the technicians in sufficient number in each workshop to assist the workshop teacher in the present application.

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TABLE OF STUDENTS AND TEACHERS IN THE TECHNICAL AND INDUSTRIAL VOCATIONAL HIGH SCHOOLS DURING THE CAST THREE YEARS AND OF THE TEACHER REQUIREMENT



NOTE: This table has been prepared with the scale of one teacher and sixteen students.

e. IMPROVEMENT OF THE EMPLOYMENT CONDITIONS OF THE TEACHERS OF THE WORKSHOP AND PROFESSIONAL COURSES

In order to attain the required objective in the Industrial Technical Education, the most important three sources are the investment, equipment and teacher of these sources, investment and equipment are directly related to the budgetary possibilities.

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Since State Personnel Law and other additional Payment legislation of today do not satisty the needed teacher of the workshop and professional course especially in respect of the salary which he does not receive in the same amount as those in the market, in spite of the increase in the numbers of schools, sections and studerts, the number of teachers is decreasing, which adversely affects the quality of the education in the vocational and technical education.

In order to prevent the qualified teacher from going into market and to employ him in the school, the following should be paid to him.

- (a) "Additional payment for the diffrailty of procurement" by the Additional Payment Decree
- (b) "Special Service Indemnity"
- (c) Different additional course payment as in carly 1970's.

As long as these measures are not taken and the requirement of personnel who have the new technological knowledge in the industry persists, it will not be possible to employ the competent and experienced teachers in our schools, and this appears to be a danger for the tuture of our vocational and technical education.

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The document No. 251.31/Per.14682 and dated December 17,1985 prepared on this matter has been presented to the office of Prime-Ministry of Finance and customs, Undersecreteriat of state Planning Organization and state Personnel Department.

f. APPLICATION IN THE ACADEMIC YEAR OF 1986-1987 OF THE WEEKLY DISTRIBUTION TABLES OF COURSES RE-ARRANGED

The weekly distribution tables of courses applied in the institutions of the Industrial Technical Education and the curricula based on them have importance.

In the past years, the weekly hours of some courses were increased and decision was taken on offering some new courses without taking into consideration the curricula applied by the schools, and the vocational fields.

As a result of this;

- (1) The weekly hours of courses offered in the technical high schools varied between 46 and 52, and the type of courses between 14 and 19.
- (2) The weekly hours of courses offered in the Industrial vocational High schools varied between 46 and 51, and the type of courses again between 14 and 19.

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- (3) Since the number and type of the courses of the general sciences have been increased in the curricala of Technical High Schools and Industrial Vocational High Schools, the vocational High Schools, the vocational education of these schools could not be realized in respect of quality to the extent planned.
- (4) It is pedagogically wrong to subject a student at the age of development to an education between 46 and 52 hours per week.
- (5) With such heavy curricula, students do not have time for the activities outside the courses, which is necessary for their healthy development.
- (6) The load of education in the present curricula does not make it possible for the student to learn individually (Table 25/, a-b).

Therefore, the weekly distribution tables of courses applied in our schools were re-arranged and submitted to the Board of instructions and Training in 1985 (Table 25/c.d.e.f).

In addition, because of the developing and continuously changing technology, the training programs applied in the vocational high schools have to be changed frequently in a way that the techincal personnel required by the fields of employment can be trained.

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The curricula to be prepared on the basis of the weekly distribution tables of courses re-arranged will also be re-arranged by developing them stepwise, and applied in the academic year of 1986-1987.

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