Chapter Two
Regional Outlook

2.1 Introduction

This chapter comprises a highlight of the current situation of the population, general education and the industrial sector by the regions of the Kingdom.

2.2 Population by Region

According to the 1992 (1412/13H) census the Kingdom's Population was just over 16.9 million. But, since then, by all accounts the population has grown drastically. More recent (2000) estimates (Ministry of Planning) gave a figure of above 22 million of which 16.4 million were Saudi nationals (73.6%). Of the Saudi population, 50.2% were males and 49.8% females. The non-Saudi nationals reached 5.8 million (26.4%).

Table (2-1) shows the population of the Kingdom in 2000 by nationality, sex and region. Makkah Region's population was estimated to be about 5.7 million (26.1%) ranked as the first region in the Kingdom as far as population number is concerned. Then followed by Riyadh Region with a total population of 5 million representing about (22.5%) of the total population. Thirdly came the Eastern Region by a population of 3.2 million (14.5%). Asseer, Medinah and Jizan Regions' population were 1.8, 1.5 and 1.2 million respectively.

Table (2-1)
Population of The Kingdom in 2000 By Sex, Nationality & Regions (in Thousands)

Region	Saudi			Non Saudi			Total		
	M.	F.	T.	M.	F.	T.	M.	F.	T.
Riyadh	1,709	1,648	3,357	1,085	537	1,623	2,769	2,193	4,962
Makkah	1,828	1,856	3,684	1,289	806	2,094	3,084	2,661	5,745
Jizan	524	532	1,055	74	45	119	601	584	1,185
Eastern Prov.	1,236	1,140	2,375	589	227	817	1,815	1,379	3,193
Asseer	741	754	1,495	168	53	221	911	818	1,729
Qassim	411	418	829	150	49	200	559	473	1,032
Hail	232	237	469	56	20	76	289	260	548
Medinah	549	550	1,099	228	121	349	773	676	1,450
Baha	212	244	456	34	13	47	247	261	508
Northern Frontier	117	112	230	21	10	30	139	124	262
Tabuk	268	254	522	66	28	94	334	286	620
Najran	174	162	336	54	15	69	227	180	407
Jouf	152	149	301	54	11	65	206	161	368
Total	**8,151**	**8,057**	**16,208**	**3,867**	**1,935**	**5,802**	**11,954**	**10,056**	**22,010**

Source:SAMA Annual Report 1420H

2.3 General Education by Region

The education and training sector in the Kingdom has been witnessing continuous growth on government support for raising the cultural and technical level of human resources. The objective has been to meet the need for qualified and trained cadres needed for the development. In the general education, the total number of male students enrolled in government and private schools at the elementary, intermediate and secondary levels of general education increased from 1,869,963 students in 1995 to 2,234,195 students in 2000.

In 2000 the total number of schools at different levels of general education (government and private) was 11,918 schools. While the total number of male students enrolled in these schools reached 2,234,195 male students and the number of teaching posts were 172,704 posts.

Table (2-2) shows summary statistics on male education by stage, type of education and sponsor in the Kingdom.

As it has been shown in Table (2-2), the total number of schools at different levels of general education under the supervision of the Ministry of Education was 10,659 schools. The total number of students and teaching posts were 1,949,830 students and 150,759 posts.

Table (2-2)
Summary Statistics on Male Education by Stage, Type of Education and Sponsor in the Kingdom as of 23/Oct./2000

Stage	Sponsor	Schools	Students	Teachers
Elementary	Ministry of Education (MOE)	5,837	1,067,194	81,643
	Ministry of Def. (MOD)	32	18,042	979
	National Guard (NG)	36	14,508	836
	Jubail & Yanbuaa	13	9,923	652
	Private	349	90,931	8,915
	Total	**6,267**	**1,200,598**	**93,025**
Intermediate	Ministry of Education (MOE)	3,034	514,872	40,481
	Ministry of Def. (MOD)	51	11,580	486
	National Guard (NG)	28	7,705	383
	Jubail & Yanbuaa	9	4,035	260
	Public Security (PS)	4	619	
	Private	317	38,117	3,843
	Ed. Institutions	60	11,999	1,169
	Islamic University	3	727	63
	Total	**3,506**	**589,654**	**46,685**
Secondary	Ministry of Education (MOE)	1,449	331,076	23,833
	Ministry of Def. (MOD)	44	9,346	295
	National Guard (NG)	18	4,560	206
	Jubail & Yanbuaa	5	2,795	177
	Public Security (PS)	4	754	
	Private	222	46,455	3,392
	Ed. Institutions	60	11,573	222
	Islamic University	2	619	45
	Total	**1,804**	**407,178**	**28,170**
MOE Teacher Colleges		18	26,903	2,050
MOE Special Education		321	9,785	2,752
Total	Ministry of Education (MOE)	10,659	1,949,830	150,759
	Private Special Education	2	77	22
	Ministry of Def. (MOD)	127	38,968	1,760
	National Guard (NG)	82	26,773	1,425
	Jubail & Yanbuaa	27	16,753	1,089
	Public Security (PS)	8	1,373	0
	Private	888	175,503	16,150
	Ed. Institutions	120	23,572	1,391
	Islamic University	5	1,346	108
Grand Total		**11,918**	**2,234,195**	**172,704**

Source: Ministry of Education-Computer Dep., Summary Statistics on Male Education / 2000

The total number of schools, students and teaching posts under supervision of the Ministry of Education in the various regions is shown in Table (2-3), (2-4) and (2-5) respectively.

Of the total number of students enrolled in schools under Ministry of Education supervision in Makkah Region was 456,406 students representing 23.4% of the total students. Riyadh Region also shows a significant contribution in the general education, the number of students in this region was 406,702 students (20.9%). Then comes in the third level of ranking Eastern Region with a total number of 283,996 students (14.6%). Asseer Region comes in the fourth level of ranking in the Kingdom. The total number of students in this region was 176,192 students representing 9% of total students enrolled in schools under supervision of the Ministry of Education.

Table (2-3)
Schools by Region (2000/2001) in Ministry of Education

S. No.	Region	Elementary	Intermediate	Secondary	Teacher Colleges	Special Education	Total
1	Riyadh	1060	543	263	2	69	1937
2	Makkah	1031	534	265	4	67	1901
3	Medinah	414	230	98	1	12	755
4	Qassim	400	195	93	1	20	709
5	Eastern	549	346	175	2	46	1118
6	Asseer	840	405	198	2	28	1473
7	Hayel	285	122	63	1	13	484
8	Tabouk	164	86	39	1	14	304
9	Baha	262	113	52	1	8	436
10	North Frontiers	80	43	22	1	6	152
11	Jouf	120	72	37	1	10	240
12	Jizan	489	265	104	1	23	882
13	Najran	143	80	40	0	5	268
Grand Total		**5837**	**3034**	**1449**	**18**	**321**	**10659**

Source: Ministry of Education -Computer Dep., Summary Statistics on Male Education / 2000

Table (2-4)

Students by Region (2000/2001) in Ministry of Education

S. No.	Region	Elementary	Intermediate	Secondary	Teacher Colleges	Special Education	Total
1	Riyadh	226,602	106,402	67,980	3,350	2,368	406,702
2	Makkah	245,582	120,310	81,365	6,669	2,480	456,406
3	Medinah	77,294	37,028	24,048	1,235	510	140,115
4	Qassim	56,482	25,604	15,544	1,223	636	99,489
5	Eastern	148,690	79,779	51,168	2,747	1,612	283,996
6	Asseer	94,323	46,020	31,998	3,120	731	176,192
7	Hayel	30,086	14,161	8,904	1,557	203	54,911
8	Tabouk	33,753	15,297	8,500	1,362	330	59,242
9	Baha	20,770	10,968	7,981	1036	73	40,828
10	North Frontiers	16,736	7,286	4,494	1,056	87	29,659
11	Jouf	21,540	10,470	6,630	1713	188	40,541
12	Jizan	70,085	30,067	16,000	1,835	430	118,417
13	Najran	25,251	11,480	6,464	0	137	43,332
Grand Total		**1,067,194**	**514,872**	**331,076**	**26,903**	**9,785**	**1,949,830**

Source: Ministry of Education -Computer Dep., Summary Statistics on Male Education / 2000

Table (2-5)

Teaching Posts by Region (2000/2001) in Ministry of Education

S. No.	Region	Elementary	Intermediate	Secondary	Teacher Colleges	Special Education	Total
1	Riyadh	15,982	7,808	4,571	298	675	29,334
2	Makkah	18,115	8,885	5,610	496	627	33,733
3	Medinah	5,400	2,812	1,651	115	141	10,119
4	Qassim	5,161	2,448	1,283	98	182	9,172
5	Eastern	9,619	5,251	3,405	227	466	18,968
6	Asseer	8,867	4,286	2,699	225	218	16,295
7	Hayel	2,851	1,449	880	122	59	5,361
8	Tabouk	2,232	1,061	525	105	98	4,021
9	Baha	2,640	1,347	675	86	10	4,758
10	NorthFrontiers	1,242	553	327	84	50	2,256
11	Jouf	1,640	759	487	84	65	3,035
12	Jizan	6,077	2,917	1,193	110	121	10,418
13	Najran	1,817	905	527	0	40	3,289
Grand Total		**81,643**	**40,481**	**23,833**	**2,050**	**2,752**	**150,759**

Source: Ministry of Education -Computer Dep., Summary Statistics on Male Education / 2000

2.4 Industry

The Ministry of Industry and Electricity issued 923 new industrial licenses for various industrial activities during 2000.A breakdown of new industrial licenses according to their activity is shown in the following table.

Table (2-6)
New Industrial Licenses and Cumulative Number of Operating Units by their Activities for the Year 2000

Industrial Activity	Licenses Issued During 2000	Cumulative No. of Operating Units
Food and beverages	148	536
Textiles, ready-made garments and leather products.	101	163
Wood products and furniture	54	171
Paper products and printing materials	34	209
Chemical and plastic products	314	688
Construction materials, ceramic and glass products	62	566
Basic metal products	7	11
Manufactured metal products and machines	177	936
Other industries	26	81
Transport and storage	-	20
Total	**923**	**3.381**

Source: SAMA Annual Report for 2001.

Under the Regulation for Protection and Promotion of National Industries and Foreign Capital Investment Law, the number of operating industrial units in various regions in the Kingdom at the end of 2001 stood at 3,503. A breakdown of these units by region indicates that 1,239 units were located in Riyadh Region accounting for (35.5%) of total units of total operating units in the Kingdom. Then comes Makkah Region with at total operating units of 942 (26.9%). Eastern Region is ranked to be as third region as far as the location of operating industries is concerned, with the total units of 803 industrial units (22.9%). The fourth region is Gassim Region with 144 industrial operating units (4.1%). Table (2-7) shows the number of licensed factories operating in the Kingdom in 2001.

Table (2-7)

The Number of Licenced Factories Operating Under the Regulation for Protection and Promotion of National Industries and Foreign Capital Investment Law by Activity and Regions (Dec. 2001).

S. No.	Activities \ Region	Riyadh	Makkah	Medinah	Qassim	Eastern	Asseer	Hayel	Tabouk	Baha	North Frontiers	Jouf	Jizan	Najran	Total
1	Manufacture of Food and Beverages.	158	165	37	38	98	12	7	10	3	2	11	8	3	**552**
2	Textiles, Weaving Apparel and Leather Industries.	74	54	7	3	33	1	0	1	0	0	0	1	0	**174**
3	Manufacture of Wood and Wood Products, Including Furniture.	80	43	6	5	43	1	2	0	0	0	0	0	0	**180**
4	Manufacture of Paper Products, Printing and Publishing.	88	66	1	5	45	1	3	0	3	0	1	1	0	**214**
5	Manufacture of Chemicals and Plastic Products.	232	205	27	31	195	10	4	11	2	1	4	2	4	**728**
6	Manufacture of Construction Materials, Chinaware, Ceramic and Glass.	186	109	31	26	129	41	5	7	4	4	4	21	11	**578**
7	Manufacture of Metal Industries.	3	8	0	0	4	0	0	0	0	0	0	0	0	**15**
8	Manufacture of Fabricated Metal Products, Machinery and Equipment.	388	260	21	33	235	14	6	2	0	1	0	3	2	**965**
9	Other Manufacturing Industries.	28	27	5	3	16	1	0	0	0	0	0	0	0	**80**
10	Transport and Storage.	2	5	3	0	5	0	0	1	0	0	0	1	0	**17**
Grand Total		1,239	942	138	144	803	81	27	32	12	8	20	37	20	3,503

Source: Ministry of Industery and Electricity.

Chapter Three
Manpower Projections

3.1 Introduction

Telling the future for any economic event, or otherwise, using any kind of sophisticated statistical methods and econometric models is becoming like fortune telling, nowadays. That is because the variables affecting any event are becoming, increasingly, more than the constants in such a volatile and ever changing world. Nevertheless, there is need to know and expect what may happen in the future for the different economic activities to insure sound planning, having in mind that future estimates and expectations may, assuming, take place within a reasonable range of variation from the real world. These estimates, though they may not be so accurate, may also be useful to tell the general trend and direction of change of the different variables and to get a feel of their behavior in the future.

In here, expected manpower structure in Saudi Arabia will be projected according to both professions and sectors for twenty years starting 2000 to 2020 based on the relevant historical average annual growth rates of each profession and each sector and sub sector, using 1999 as a base year. The ultimate objective of these projections is to estimate the potential need for training in each profession and for each economic sector in Saudi Arabia.

3.2 Method of Projections

It was first intended to use regression analysis for both the labor force professional and sectoral structures, but the available data was not helpful in this respect, because it is not continuous for any reasonable period of time. The five years development plans documents show the relevant data only at the beginning and at the

end of each five years plan as shown in Table (3-1). So far there are only three such observations which are too few for applying regression analysis. Although SAMA reports are published annually, they got their data from the development plans whenever they are available, and so they are not different from those available in the development plans documents. Other official data sources such as the Statistical Year Book, the other Central Statistics Department publications, or the Achievements of the Development Plans, also do not include the annual data for the labor force distribution neither by profession nor by sector. Faced with this problem, there is no choice except to use the data and the estimated rates of growth of 1999 on either case (professional and sectoral distribution of the labor force) to predict the annual labor force professional structure from the year 2000 till the year 2020.

Table (3-1)
Labor Force Professional Structure in the Kingdom According to Profession in the Plans

Profession	End of Fourth Plan (1989)	End of Fifth Plan (1994)	End of Sixth Plan (1999)
Professional and technical	351.9	1002.7	1122.4
Management and administration	86.6	158.0	133.9
Clerical	575.7	858.4	534.4
Sales personnel	527.5	645.6	507.6
Services personnel	1,314.2	155.9	2138.1
Agriculture and related	458.7	247.7	551.0
Production, construction and transportation	2,079.4	2369.2	2188.9
Total	**5,394.0**	**5437.5**	**7176.3**

Source: Ministry of Planning, Fifth, Sixth and Seventh Plans..

The data for the labor force are quoted from the Seventh Development Plan. The year 1999 data are used as the base year for the projections. They are shown in, Table (3-2).

Table (3-2)
Professional Structure of Labor Force
In The Kingdom In 1999

Profession	No. of workers (In Thousand)	Ratio (%)	Expected average Annual Growth Rate (%)
Professional and technical	1,122.4	15.6	0,7
Management and administration	133.9	1.9	1,3
Clerical	534.4	7.4	0,9
Sales personnel	507.6	7.1	0,8
Services personnel	2,138.1	29.8	0,5
Agriculture and related	551.0	7.7	0,9
Production, construction and transportation	2,188.9	30.5	1,4
Total	**7,176.3**	**100,0**	**0,9**

Source: Ministry of Planning, Seventh Development Plan.

Year 1999 is considered as the base year for data on both the professional and sectoral labor structures. The growth rate for each variable is assumed to stay the same for the coming twenty years. This assumption is based on the best guess that one can come up with. This is because the averages of the past growth would not represent the present averages as the past development plans had different objectives and different resources. The Seventh Development Plan could be the best estimate for the present and the closest to the future that will contribute in shaping. Therefore, these averages were used for the projections. The expected growth rate is applied to each projected year starting from 2000 to 2020 to find the projected figures in each case. The results are shown and analyzed below.

3.3 Results of the Projections

3.3.1 Projections of the Labor Professional Structure

Table (3-3) shows the results of the labor force professional structure projections using the method described above. The projected total labor force ranges from 7.24 millions in 2000 to around 8.7 million employees in 2020, if the overall average growth rate is (0.9%) and if the growth rates for each profession remain the same throughout the projections period of time.

Figure: Table (3-1)

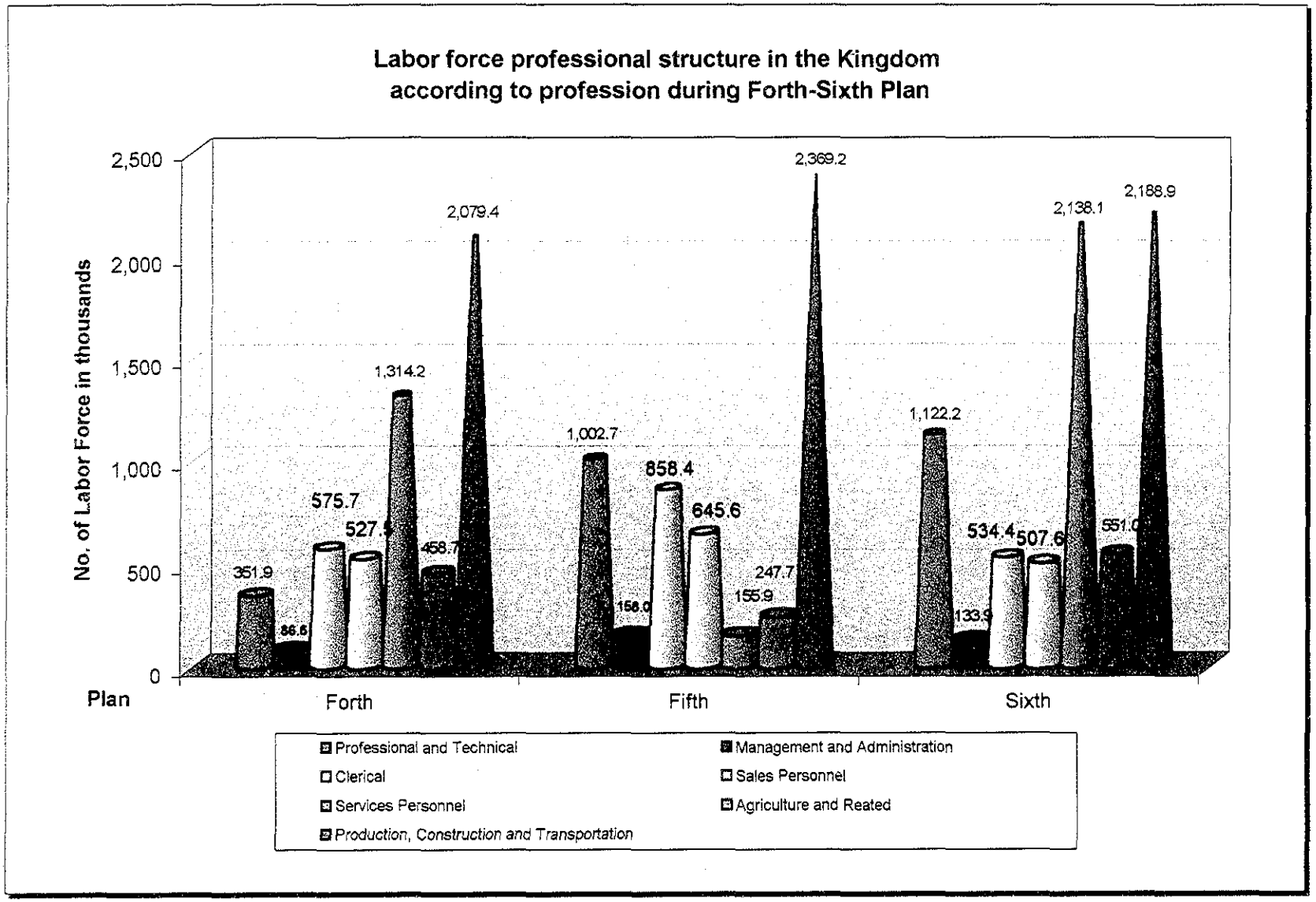


Table (3-3)
Projections for the professional structure of labour Force in the Kingdom (from 1999 to 2020)

professions / years	Professional & Technical	Management & Administration	Clerical	Sales Personnel	Services Personnel	Agriculture & Related	Construction,Production&Transportation	Total
No.of Employees (In Thousands) Base Year (1999)	1,122.4	133.9	534.4	507.6	2,138.1	551.0	2,188.9	7,176.3
Annual Rate of Growth (Percentage)	0.7	1.3	0.9	0.8	0.5	0.9	1.4	0.9
Multiplication Factor	1.007	1.013	1.009	1.008	1.005	1.009	1.014	
2000	1,130.3	135.6	539.2	511.7	2,148.8	556.0	2,219.5	7,241.1
2001	1,138.2	137.4	544.1	515.8	2,159.5	561.0	2,250.6	7,306.5
2002	1,146.1	139.2	549.0	519.9	2,170.3	566.0	2,282.1	7,372.6
2003	1,154.2	141.0	553.9	524.0	2,181.2	571.1	2,314.1	7,439.5
2004	1,162.2	142.8	558.9	528.2	2,192.1	576.2	2,346.5	7,507.0
2005	1,170.4	144.7	563.9	532.5	2,203.1	581.4	2,379.3	7,575.2
2006	1,178.6	146.6	569.0	536.7	2,214.1	586.7	2,412.6	7,644.2
2007	1,186.8	148.5	574.1	541.0	2,225.1	591.9	2,446.4	7,713.9
2008	1,195.1	150.4	579.3	545.3	2,236.3	597.3	2,480.7	7,784.3
2009	1,203.5	152.4	584.5	549.7	2,247.4	602.6	2,515.4	7,855.5
2010	1,211.9	154.3	589.8	554.1	2,258.7	608.1	2,550.6	7,927.5
2011	1,220.4	156.3	595.1	558.5	2,270.0	613.5	2,586.3	8,000.2
2012	1,228.9	158.4	600.4	563.0	2,281.3	619.1	2,622.5	8,073.6
2013	1,237.5	160.4	605.8	567.5	2,292.7	624.6	2,659.2	8,147.9
2014	1,246.2	162.5	611.3	572.0	2,304.2	630.3	2,696.5	8,223.0
2015	1,254.9	164.6	616.8	576.6	2,315.7	635.9	2,734.2	8,298.8
2016	1,263.7	166.8	622.3	581.2	2,327.3	641.7	2,772.5	8,375.5
2017	1,272.6	168.9	627.9	585.9	2,338.9	647.4	2,811.3	8,453.0
2018	1,281.5	171.1	633.6	590.6	2,350.6	653.3	2,850.7	8,531.3
2019	1,290.4	173.4	639.3	595.3	2,362.4	659.1	2,890.6	8,610.5
2020	1,299.5	175.6	645.0	600.1	2,374.2	665.1	2,931.0	8,690.5

The projected labor force in the professional and technical jobs ranges from 1.13 million employees in 2000 to 1.3 million employees in 2020, at annual growth rate of 0.7%.

Management and administration jobs may increase from 135,600 employees in 2000 to 175,600 employees in 2020, at an annual growth rate of 1.3%.

These categories of employees (professional, technical and administrators) are mostly university graduates who need more sophisticated training to refresh them and keep them up to date in their professional, technical and administrative fields. This could be achieved by short term training periods and crash courses delivered by highly qualified teachers and trainers.

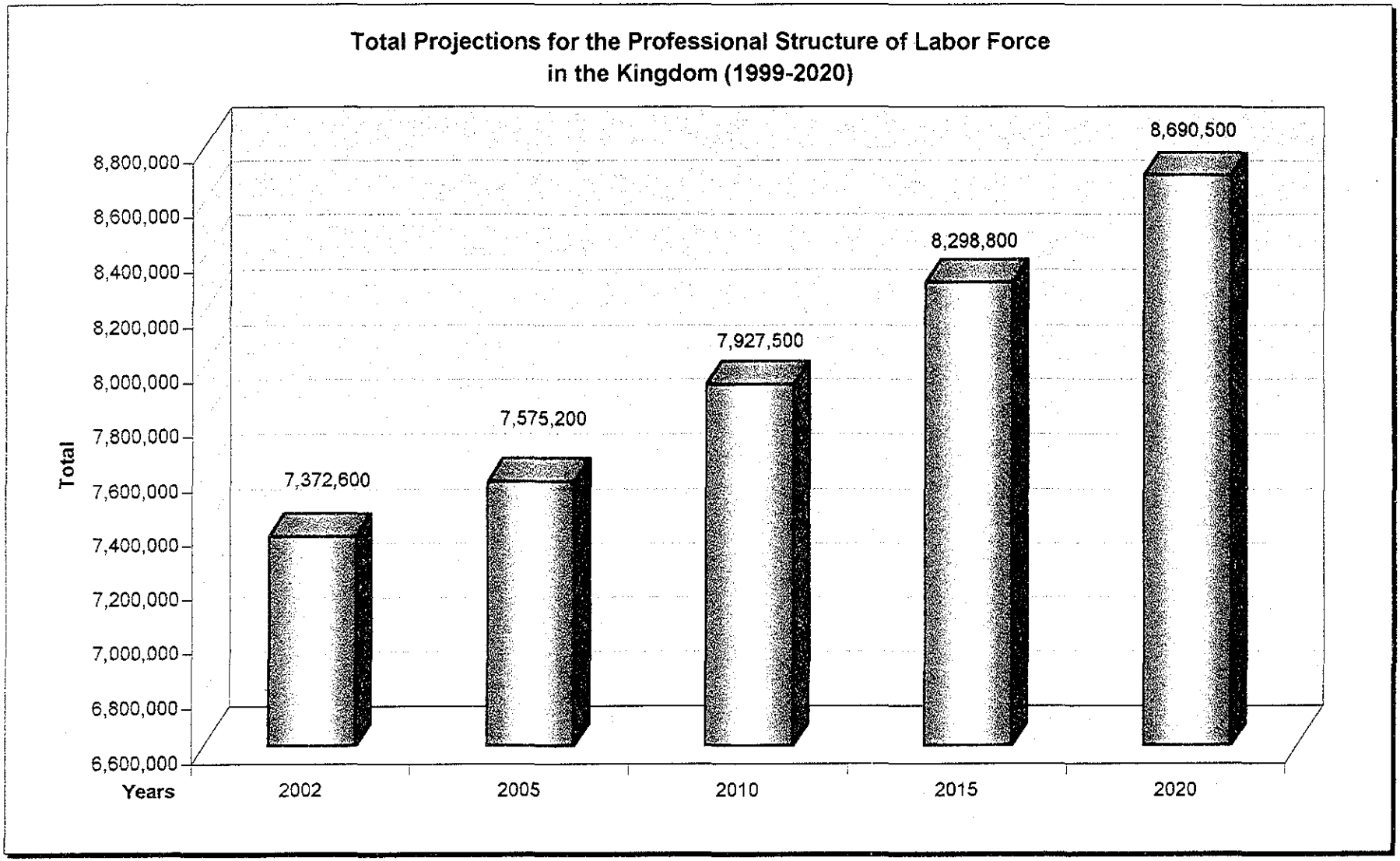
As for clerical jobs, the number of employees in this area may increase at the rate of 0.9% per year from 539,200 employees in 2000 to 645,000 employees in 2020, Table (3-3).

Sales personnel may increase at rate of 0.8% per year from 511,700 employees in 2000 to 600,100 employees in 2020.

Services personnel may increase at the rate of 0.5% per year from 2.15 million employees in 2000 to 2.37 million employees in 2020. This is the second largest sector in Saudi Arabia after the production, construction and transportation sector, and that is why it is employing relatively larger number of employees.

These three categories of employees (clerical, sales and services personnel) need training and retraining at an intermediate level in their respective jobs. They may need training periods of three months or so every now and then, by experienced trainers, before and on the job.

Figure: Table (3-3)



Agriculture and related jobs employees are expected to increase at the rate of 0.9% per year, from 556,000 employees in 2000 to 665,100 employees in 2020. They need technical training in farming and fishing techniques as well as in farm and fishery management at different levels. This is a very heterogeneous sector as far as training needs are concerned. For example, agricultural sciences and fieldwork are divided into horticulture, agronomy, forestry animal husbandry, plant protection and veterinary. Agricultural management includes agricultural economics, accounting and extension. Likewise, the fishery industry is not less diversified. Effective training in these areas should be highly diversified to meet the needs of the diversified employees in this profession, having in mind that to save water and labor in this important sector, agriculture has to expand vertically rather than horizontally. Vertical expansion needs the use of up to date technology, which requires highly technical employees who need highly technical training.

As for the construction industry, which is starting to boom again after recessing during the late eighties and early nineties of the previous century, its employees are expected to increase at the rate of 1.4% per year (which is the highest growth rate compared to the rates of growth of all other types of employees), from 2.22 million employees in 2000 to 2.93 million employees in 2020. Training needs for employees in this sector varies according to professional expertise because they range from highly qualified civil and architectural engineers to simple workers, passing through contractors, engineering consultants, project managers, value engineers, construction management... etc.

The general observation from the above projections is that the Saudi Economy is moving towards more skilled labor. The same observation is mentioned in the Seventh Development Plan.

3.3.2 Projections for the Sectoral Structure of Labor Force

Table (3-4) shows the projections for the sectoral labor force structure in Saudi Arabia till 2020, using the same method described above which was also used for predicting the professional structure of the labor force in Saudi Arabia shown in table (3-3).

The highest growth rates of the labor force, as distributed by sectors, are expected in the industrial sector in general and in the manufacturing industries in particular, which are 2.3% and 2.4% per year respectively. The number of employees in the manufacturing sector is expected to increase from 602,600 employees in 2000 to 953,800 employees in 2020, growing at the rate of 2.3% per year.

That means training of Saudis to work in industry will be highly needed. However, training should not be limited to the know-how of operating and maintaining machines only, but it should also go further to include training in technology imitation and building the machines themselves. That helps in inventions and innovations. Such kind of training policies were used by technologically successful countries such as Japan, Malaysia, Taiwan and the rest of the Asian countries generally described as the Seven Tigers. However, imitation should be done "under license" so as not to infringe in the Property Rights of the original manufacturers.

The community services sector which is currently one of the largest sub-sector in Saudi Arabia in term of the number of employees, (around 2.22 million employees in 2000) is expected to reach 2.36 million employees in 2020, although its growth rate is only 0.3%.

Table (3-4)
Projections for the Structure of Labour Force by Sector
In the Kingdom (from 1999-2020)

Sector / Year	1. Non-Oil Private Sector	1.1 Productive Private Sector:	a. Agriculture	b. Non-Oil Mining	c. Manufacturing:	- Oil Refining	- Petrochemicals	- Other Industries	d. Electricity, Gas,& Water	e. Construction	1.2 Private Service Sector:	a. Trade	b. Transport & Communications	c. Community & Personal Services	d. Finance & Real Estate Services	2. Government Services	3. Non-Oil Sectors (1+2)	4. Crude Oil & Natural Gas	Total Sectors (3+4)
No.of Employees Base Year (1999)	6,161.2	2,273.3	557.9	13.2	589.0	21.5	9.4	558.1	93.5	1,019.7	3,887.9	1,036.6	299.2	2,217.2	334.9	916.2	7,077.4	98.9	7,176.3
Growth Rate	1.0	1.60	0.9	2.2	2.3	0.3	1.4	2.4	1.7	1.5	0.6	0.7	0.7	0.3	2.3	0.3	0.9	0.3	0.9
Multiplication Factor	1.010	1.016	1.009	1.022	1.023	1.003	1.014	1.024	1.017	1.015	1.006	1.007	1.007	1.003	1.023	1.003	1.009	1.003	1.009
2000	6,220.7	2,309.1	562.9	13.5	602.6	21.6	9.5	571.5	95.1	1,035.0	3,911.6	1,043.9	301.3	2,223.9	342.6	918.9	7,139.6	99.2	7,238.8
2001	6,281.1	2,345.5	568.0	13.8	616.5	21.6	9.7	585.2	96.7	1,050.5	3,935.6	1,051.2	303.4	2,230.5	350.5	921.7	7,202.8	99.5	7,302.3
2002	6,342.4	2,382.6	573.1	14.1	630.7	21.7	9.8	599.3	98.4	1,066.3	3,959.8	1,058.5	305.5	2,237.2	358.5	924.5	7,266.8	99.8	7,366.6
2003	6,404.6	2,420.3	578.3	14.4	645.3	21.8	9.9	613.6	100.0	1,082.3	3,984.3	1,065.9	307.7	2,243.9	366.8	927.2	7,331.8	100.1	7,431.9
2004	6,467.8	2,458.7	583.5	14.7	660.3	21.8	10.1	628.4	101.7	1,098.5	4,009.1	1,073.4	309.8	2,250.7	375.2	930.0	7,397.8	100.4	7,498.2
2005	6,531.9	2,497.7	588.7	15.0	675.6	21.9	10.2	643.4	103.5	1,115.0	4,034.2	1,080.9	312.0	2,257.4	383.9	932.8	7,464.7	100.7	7,565.4
2006	6,597.0	2,537.5	594.0	15.4	691.2	22.0	10.4	658.9	105.2	1,131.7	4,059.5	1,088.5	314.2	2,264.2	392.7	935.6	7,532.6	101.0	7,633.6
2007	6,663.1	2,578.0	599.4	15.7	707.2	22.0	10.5	674.7	107.0	1,148.7	4,085.2	1,096.1	316.4	2,271.0	401.7	938.4	7,601.6	101.3	7,702.9
2008	6,730.3	2,619.2	604.8	16.1	723.6	22.1	10.7	690.9	108.8	1,165.9	4,111.1	1,103.8	318.6	2,277.8	411.0	941.2	7,671.5	101.6	7,773.1
2009	6,798.4	2,661.1	610.2	16.4	740.4	22.2	10.8	707.5	110.7	1,183.4	4,137.3	1,111.5	320.8	2,284.6	420.4	944.1	7,742.5	101.9	7,844.4
2010	6,867.7	2,703.8	615.7	16.8	757.6	22.2	11.0	724.5	112.5	1,201.2	4,163.9	1,119.3	323.1	2,291.5	430.1	946.9	7,814.6	102.2	7,916.8
2011	6,938.0	2,747.2	621.2	17.1	775.2	22.3	11.1	741.8	114.5	1,219.2	4,190.7	1,127.1	325.3	2,298.3	440.0	949.7	7,887.7	102.5	7,990.2
2012	7,009.4	2,791.5	626.8	17.5	793.3	22.4	11.3	759.6	116.4	1,237.5	4,217.9	1,135.0	327.6	2,305.2	450.1	952.6	7,962.0	102.8	8,064.8
2013	7,081.9	2,836.5	632.5	17.9	811.7	22.4	11.4	777.9	118.4	1,256.0	4,245.4	1,142.9	329.9	2,312.2	460.4	955.4	8,037.4	103.1	8,140.5
2014	7,155.6	2,882.3	638.2	18.3	830.5	22.5	11.6	796.5	120.4	1,274.9	4,273.3	1,150.9	332.2	2,319.1	471.0	958.3	8,113.9	103.4	8,217.3
2015	7,230.4	2,929.0	643.9	18.7	850.0	22.6	11.7	815.7	122.4	1,294.0	4,301.4	1,159.0	334.5	2,326.1	481.9	961.2	8,191.6	103.8	8,295.4
2016	7,306.5	2,976.5	649.7	19.1	869.8	22.6	11.9	835.2	124.5	1,313.4	4,330.0	1,167.1	336.9	2,333.0	492.9	964.1	8,270.5	104.1	8,374.6
2017	7,383.7	3,024.9	655.5	19.5	890.0	22.7	12.1	855.3	126.6	1,333.1	4,358.8	1,175.3	339.2	2,340.0	504.3	967.0	8,350.6	104.4	8,455.0
2018	7,462.1	3,047.1	661.4	20.0	910.8	22.8	12.2	875.8	128.8	1,353.1	4,388.0	1,183.5	341.6	2,347.1	515.9	969.9	8,432.0	104.7	8,536.7
2019	7,541.9	3,124.2	667.4	20.4	932.1	22.8	12.4	896.8	131.0	1,373.4	4,417.6	1,191.8	344.0	2,354.1	527.7	972.8	8,514.6	105.0	8,619.6
2020	7,622.9	3,175.3	673.4	20.8	953.8	22.9	12.6	918.4	133.2	1,394.0	4,447.6	1,200.1	346.4	2,361.2	539.9	975.7	8,598.6	105.3	8,703.9

Among the sub-sectors of the private services sector, which is growing at a faster rate than the others is the finance and real state sub-sector. It is expected to grow at the rate of 2.3% per year. Starting at 342,600 employees in 2000 it is expected to become 539,900 employees in 2020.

The training needs for the private services sector which include trade, transportation and communication, community and personal services, finance and real estate, should concentrate on business administration, money and banking, finance, hotel, restaurant and hospital management etc. Training in English Language and computer usage and operation is also badly needed for this sector.

The productive private sector is the largest sector measured by the number of employees which was estimated at 2.31 million employees in 2000. Increasing at the rate of 1.6% per year it is expected to reach around 3.18 million employees in 2020. Training needs in this sector are on technical training and the utilization and imitation of the state of the art technology.

Although the general structure of the labor force in Saudi Arabia is not expected to change appreciably sector wise, it will be inclined more towards services and industries instead of being inclined more towards the oil sector.

Generally speaking, the labor force structure in Saudi Arabia will be gradually more diversified overtime than it is today. Another structural change is that it will be dominated by the private sector more than it is today, due to privatization.

Another noticeable structural change expected in the labor market in Saudi Arabia is that it will be dominated by Saudi nationals instead of the current dominance of foreign labor. According to the Seventh

Development Plan, the Saudi labor will increase at the rate of 4.66% per year during the period (1420-1425) while the growth rate of the foreign labor is expected to decline during the mentioned period by –2.25%. That will have a tremendous effect upon the distribution of labor in Saudi Arabia by nationality.

3.3.3 Other Potential Trainees

Among the Saudi manpower who need training badly are the general education dropouts and graduates who enter the labor market directly from the elementary, intermediate and secondary schools without any training. During the Seventh Development Plan, (1420-1425) the numbers of graduates and dropouts of elementary, intermediate and secondary stages expected to join the labor market are 92,300, 143,100 and 213,900 respectively. The total comers to the labor market of this kind of manpower could be estimated at 89,860 employees which represents 54% of the total Saudi manpower coming to the labor market every year during the seventh development plan. And with a conservative, estimate of the same number will enter into the labor market every year during the Eighth Development Plan (1425-1430), although the total number of students in each stage will be higher than what is expected in the Seventh Development Plan, Table (3-5).

Table (3-5)

General Education Graduates and Dropouts Expected to Join the Labor Market During the Seventh and Eighth Development Plans

Plans	Elementary stage		Intermediate stage		Secondary stage		Total plan	Total Yearly
	Plan	Yearly	Plan	Yearly	Plan	Yearly		
Seventh Plan	92,300	18,460	143,100	28,620	213,900	42,780	449,300	89,860
Eighth Plan*	92,300	18,460	143,100	28,620	213,900	42,780	449,300	89,860
Total	184,600	36,920	286,200	57,240	427,800	85,560	898,600	179,720

Source: Ministry of Planning, Seventh Development Plan.

* Presented to show the total number in the next seven years, if the number stayed the same.

The minimum expected total number of dropouts and graduates from general education three stages expected to enter the labor market during both the current Seventh Development Plan (1420-1425) and the up coming Eighth Development Plan (1425-1430) is 184,600, 286,200 and 427,800 respectively. Their grand total during the period (1420-1430) is 898,600, which is underestimated because of our assumption that these numbers will be the same for the two mentioned plans. That is why training of these young men is very essential. Entering the labor market with general educational qualifications and without any training skills will put them under the pressure of competing with the foreign unskilled labor who are ready to do any jobs with low salaries. Both of these two competitive elements the Saudis cannot beat. They neither will accept the types of unskilled labor available for them, nor will they accept the salaries of these kinds of jobs. So, most probably they will choose to be unemployed, which is a dangerous thing to happen.

The training needs of these graduates can be met by expanding the utilization capacity of GOTEVT educational and training institutions and by diversifying the skill levels.

3.4 Summary

To sum up this chapter, the projections done for the Saudi Labor Force, as distributed by sectors and by professions, show that it will be relatively more diversified than it is today, more labor will be employed in the private sector, and the Saudi nationals will dominate the labor market, instead of the foreign labor. As for training, it should be more diversified in skill levels than it is today in order for the Saudi employees to cope with future labor market requirements and demands.

Training for those entering the labor market from the three stages of general education, being graduates or dropouts, is of utmost importance. Another group coming to the labor market with no recognized level of skill are those dropouts from the universities and other higher education institutions. They form a burden on the GOTEVT institutions for skill building and certification, so that they can go to the labor market with recognized skill standards.

Chapter Four
The Present Status of Technical Education and Vocational Training

4.1 Technical Education

4.1.1 Colleges of Technology

The history of Colleges of Technology goes back to the year 1404H when the first college was opened in Riyadh. Due to the importance of this type of education in providing the local labor market with its requirements of qualified manpower, the number of Colleges of Technology had been increased to reach 16 colleges in 1420H. In addition to one college of technology (Agricultural) in Buraidah, these colleges are distributed in various Kingdom's cities, these are; Riyadh, Jeddah, Dammam, Buraida, Abha, Ahsa, Madina, Hail, Baha and Makkah. In addition to the Diploma certificate, a bachelor degree program was introduced in the College of Technology of Riyadh in 1413H. The most important specialties available in Colleges of Technology are:

a) General
b) Mechanical Technology
c) Electrical Technology
d) Electronic Technology
e) Computer Technology
f) Industrial Chemical Technology
g) Construction Technology
h) Management Technology

4.1.1.1 Present Status of the Colleges of Technology

The number of students registered at Colleges of Technology in academic year 20/1421H was 19,635 students, of these 521 students were on the bachelor degree program. The number of new enrolled student in the same year was 9,562 students, 180 students out of them were on the bachelor degree program.

The number of students graduated from Colleges of Technology stood at 1,760 students in 19/1420H, of these only two students were graduated with a bachelor degree. Jeddah College of Technology had the highest percentage of graduates of 34% of the total number of graduates at Colleges of Technology in 19/1420H amounting to 600 students.

The number of teaching staff members of different qualifications and specialties at Colleges of Technology was 1,638 members in 20/1421H, of these 609 members were in Riyadh and Jeddah colleges which constituted about 37% of total Colleges of Technology teaching staff members. The following Table shows new enrolled, registered and graduated students and teaching staff members at Colleges of Technology in 20/1421H.

Table (4-1)
Trainees, Graduates and Teaching Staff at Colleges of Technology in 20/1421H

S.N.	College	Opening Date	Students			Teaching Staff
			New Enrolled	Registered	Graduates***	
1	College of Tech. At Riyadh	1404H	1,426*	3,753*	315*	403
			180**	521**	2**	
2	College of Tech. At Jeddah	1408H	1,433	2,934	600	206
3	College of Tech. at Dammam	1408H	927	2,204	157	142
4	College of Tech. At Buraida	1408H	764	1,519	245	223
5	College of Tech. At Abha	1410H	733	1,404	198	131
6	College of Tech. At Ahsa	1410H	1,020	1,830	181	117
7	College of Tech. At Medinah	1418H	614	1,246	0	89
8	College of Tech. At Hail	1418H	465	1,088	0	74
9	College of Tech. At Baha	1419H	476	1,177	0	58
10	College of Tech. At Makkah	1420H	420	420	0	59
11	College Tele & Infor. at Riyadh	1411H	300	300	22	50
12	College of Tech. Electro. at Jeddah	1411H	804	1,239	40	86
13	College of Tech. At Tabuk	New				
14	College of Tech. At Najran	New				
15	College of Tech. At Jizan	New				
16	College of Tech. At Jouf	New				
17	Agric. Tech. College at Qasseem	New				
Grand Total			9,562	19,635	1,760	1,638

Source: GOTEVT, Statistical Report 20/1421H.
* Diploma.
** Bachelor.
*** In 19/1420H.

4.1.1.2 Major Problems Facing Colleges of Technology

According to the workshop discussions and the presented papers, it was apparent that the colleges of technology faces the following problems which affect their efficiency and effectiveness:

- The period is three years which is too long period for similar type of education.
- The long period limits the utilization capacity of these colleges to absorb more students.
- The broad specialization prepares less skilled graduates and less desired by the labor market.
- The emphasis is more on general education and general subjects at the expense of technical subjects and practical training.
- The registration regulations allow students to stay more than four years.

4.1.2 Secondary Technical Institutes

4.1.2.1 Secondary Commercial Institutes

Since the first Secondary Commercial Institute was opened by GOTEVT in Riyadh in 1391H, the number of these institutes has increased steadily to reach 16 institutes. Secondary Commercial Institutes are distributed in different cities of the Kingdom which include Riyadh, Makkah, Medinah, Jeddah, Taif, Dammam, Hafuf, Qatif, Abha, Tabuk, Buraida, Hail, Baha, Najran, Jouf and Rass. The aims of these institutes are to create more educational opportunities for graduates of intermediate schools and to provide the labor market, specially financial and commercial sector, with qualified manpower. Study duration at Secondary Commercial Institutes is three years, students specialize in the third class in one of the following specialties:

- Public Relation
- Marketing
- Accounting and Bookkeeping
- Office Occupation

The number of students registered at Secondary Commercial Institutes in the Kingdom during the academic year 20/1421H, including evening and morning students, stood at 6,909 students. Riyadh Institute came in the first place, in term of the number of registered students with 891 students, and Qatif Institute in second place with 757 student. On the other hand, the number of new enrolled students at Secondary Commercial Institutes was 2,595 students in 20/1421H. Table (4-2) shows registered and new enrolled students at Secondary Commercial Institutes in 20/1421H.

Table (4-2)
New Enrolled and Registered Students at Secondary Commercial Institutes in 20/1421H

S. No.	Institute	New Enrolled	Registered
1	Riyadh	341	891
2	Jeddah	291	746
3	Dammam	184	500
4	Hafuf	232	635
5	Qatif	280	757
6	Makkah	141	503
7	Madina	200	533
8	Taif	123	358
9	Tabuk	111	270
10	Abha	138	305
11	Buraidah	162	392
12	Hayel	61	206
13	Jouf	39	90
14	Baha	104	260
15	Najran	128	250
16	Rass	60	213
Total		**2,595**	**6,909**

Source: GOTEVT Statistical Report 20/1421H.

The number of students graduated from Secondary Commercial Institutes in the academic year 19/1420H was 1,971 students. As Riyadh Secondary Commercial Institute has the highest absorptive capacity, about 16.3% of total number of graduates were from Riyadh Institute. Table (4-3) shows the number of students graduated from Secondary Commercial Institutes in 19/1420H.

Table (4-3)
Students Graduated from the Secondary Commercial Institutes in 20/1421H

S. No.	Institute	Graduates
1	Riyadh	321
2	Jeddah	178
3	Dammam	135
4	Hafuf	177
5	Qatif	260
6	Makkah	101
7	Madinah	128
8	Taif	65
9	Tabuk	61
10	Abha	66
11	Buraidah	146
12	Hail	72
13	Jouf	17
14	Baha	81
15	Najran	71
16	Rass	92
Total		1,971

Source: GOTEVT, Statistical Report 20/1421H.

The number of full time teaching staff at the Secondary Commercial Institutes during the academic year 20/1421H reached 577 teachers. This number was distributed among different subjects, namely Religion, Arabic Language, English Language, Social Subjects, Computer, Physical Training and Commercial Subjects. Most of the staff members were of Commercial subjects teachers. The number of Commercial subjects teachers was 93 teachers which represent 44% of the total number of teaching staff. Table (4-4) shows the number of the full time teaching staff at Secondary Commercial Institutes by subjects in 20/1421H.

Table. (4-4)
Full Time Teaching Staff at the Secondary Commercial Institutes by Subjects in 20/1421H

S. No.	Institute	Subject							
		Religion	Arabic	English	Social Subjects	Physical Training	Computer	Commercial Subjects	Total
1	Riyadh	6	6	13	2	1	6	19	53
2	Jeddah	3	6	13	3	1	3	25	54
3	Dammam	3	4	10	2	1	1	20	41
4	Hafuf	3	4	11	0	1	2	23	44
5	Qatif	4	4	13	2	1	2	27	53
6	Makkah	5	4	7	2	1	2	16	37
7	Medinah	5	5	10	1	1	2	24	48
8	Taif	2	2	8	1	1	1	12	27
9	Tabuk	2	2	6	1	1	3	8	23
10	Abha	3	2	7	1	1	2	11	27
11	Buraidah	7	7	10	2	1	2	19	48
12	Hail	2	3	6	2	1	2	11	27
13	Jouf	1	1	3	2	0	1	9	17
14	Baha	2	3	6	1	1	1	5	19
15	Najran	2	2	6	1	1	2	10	24
16	Rass	4	3	7	1	1	3	16	35
Total		**54**	**50**	**136**	**24**	**15**	**35**	**255**	**577**

Source: GOTEVT, Statistical Report 20/1421H.

4.1.2.2 Secondary Industrial Institutes

Saudi Arabia Industrial Sector is substantially growing at an accelerated rate. The Industrial production has increased horizontally and vertically. Therefore, demand for qualified manpower has increased steadily. To keep space with increment in demand for manpower, GOTEVT has opened ten Secondary Industrial Institutes in Riyadh, Jeddah, Dammam, Abha, Taif, Hafuf, Medinah, Onaizah, Jizan and Zulfi. As other Secondary institutes, Secondary Industrial Institutes accept intermediate schools graduates. The duration of study is three years. After its successful completion the graduate is granted Secondary

Industrial Institute Diploma. The most important specialties available in Secondary Industrial Institutes are the following:

- General Mechanics
- Electricity
- Automobile
- Metal Mechanics
- Agricultural Mechanics
- Electronics

The absorptive capacity of Secondary Industrial Institutes is relatively higher than other Secondary Institutes. In 20/1421H the total number of students registered at Secondary Industrial Institutes was 9,470 students with average of 947 students per institute. Jeddah Institute had highest number of registered students of 1,757 students that constituted 18.6% of total number of registered students at Secondary Industrial Institutes, whereas the number of new enrolled students at Secondary Industrial Institutes was 3,382 students in 20/1421H. Table (4-5) shows the number of new enrolled and registered students at Secondary Industrial Institutes in 20/1421H.

Table (4-5)
New Enrolled and Registered Students at Secondary Industrial Institutes in 20/1421H

S. No.	Institute	New Enrolled	Registered
1	Riyadh	558	1,654
2	Jeddah	513	1,757
3	Medinah	292	1,097
4	Hafuf	583	1,440
5	Abha	293	672
6	Onaiza	220	491
7	Taif	315	735
8	Dammam	281	1,062
9	Jizan	133	350
10	Zulfi	94	212
Total		**3,382**	**9,470**

Source: GOTEVT, Statistical Report 20/1421H.

The number of students graduated from Secondary Industrial Institutes in the academic year 19/1420H was 1,420 students, of these 265 students were in General Mechanics, 503 students in Electricity and 358 in Auto Mechanics and Electricity. Table (4-6) shows the number of students graduated from Secondary Industrial Institutes by specialties in 19/1420H.

Table (4-6)
Graduates from the Secondary Industrial Institutes by Specialty 19/1420H

S. No.	Institute	Specialty							
		Gen. Mech.	Elec.	Auto.	Metal Mech.	Agr. Mech.	Electro.	Print	Total
1	Riyadh	39	95	69	19	*	34	4	260
2	Jeddah	75	53	58	36	*	59	*	281
3	Medinah	26	72	40	7	*	*	*	145
4	Hafuf	27	104	34	25	*	35	*	225
5	Abha	15	36	32	*	*	*	*	83
6	Onaiza	8	26	29	*	3	14	*	80
7	Taif	44	36	17	10	*	*	*	107
8	Dammam	31	30	35	25	*	23	*	144
9	Jizan	*	32	23	*	*	*	*	55
10	Zulfi	*	19	21	*	*	*	*	40
Grand Total		**265**	**503**	**358**	**122**	**3**	**165**	**4**	**1,420**

Source: GOTEVT, Statistical Report 20/1421H.

* This specialty does not exist.

The number of teaching staff at the Secondary Industrial Institutes during the academic year 20/1421H was 1,144 teachers. This number was distributed among different subjects, namely Religion, Arabic Language, Science, English Language, Statistics, Economics, Computer, Physical Training and Industrial Subjects. Most of the staff members were industrial subjects teachers. The number of industrial subjects teachers was 891 teachers which constituted 77.8% of total number of teaching staff. Table (4-7) shows the number of teaching staff at Secondary Industrial Institutes by subjects in 20/1421H.

Table (4-7)
Teaching Staff at the Secondary Industrial Institutes by Subject in 20/1421H

S. No.	Institute	Subject								
		Rel. Ar.	Maths.	Science	Eng.	Stati. Econ.	Comp.	P.T.	Ind. Sub.	Total
1	Riyadh	8	7	7	8	2	11	1	159	203
2	Jeddah	6	8	6	9	1	4	2	127	163
3	Medinah	6	6	5	7	1	3	2	101	131
4	Hafuf	7	6	5	7	2	4	1	108	140
5	Abha	3	3	4	4	1	2	1	72	90
6	Onaiza	3	3	4	3	2	2	2	96	115
7	Taif	4	4	5	5	1	3	1	78	101
8	Dammam	5	5	4	6	2	3	2	100	127
9	Jizan	3	2	2	2	2	1	1	27	40
10	Zulfi	3	2	1	2	1	1	1	23	34
Grand Total		**48**	**46**	**43**	**53**	**15**	**34**	**14**	**891**	**1,144**

Source: GOTEVT, Statistical Report 20/1421H.

4.1.2.3 Technical Supervisors Institutes

According to the recent census the population of Saudi Arabia is increasing very rapidly. Due to this and development in houses and buildings, the construction sector experiences steady growth. Therefore, there was a need for qualified workers in the different specialization such as survey, construction and environment. Five secondary supervisors' institutes were opened in Riyadh, Abha, Tabuk, Taif, and Onaiza.

The Study duration in these institutes is three years. After its successful completion, a student is granted a diploma certificate in one of the following specialties:

- Construction Work
- Sanitary Work
- Architectural Drawing
- Survey
- Civil Construction Work

The number of students registered at Technical Supervisors Institutes in the year 1420/1421H stood at 2,430 students. Riyadh institute came in the first place in term of the number of registered students with 810 students and percentage of 33% of the total number of registered students. Tabuk Institute came in second place with 481 students. On other hand, the number of new enrolled students at Technical Supervisors Institutes was 890 students in 20/1421H. Table (4-8) shows registered and new enrolled students at Technical Supervisors Institutes in 20/1421H.

Table (4-8)
New Enrolled and Registered Students at Technical Supervisors Institutes in 20/1421H

S. No.	Institute	New Enrolled	Registered
1	Riyadh	343	810
2	Abha	161	470
3	Tabuk	154	481
4	Taif	120	352
5	Onaiza	112	317
Total		890	2,430

Source: GOTEVT, Statistical Report 20/1421H.

The number of students graduated from Technical Supervisors Institutes in the academic year 19/1420H in above-mentioned specialties stood at 576 students, of these 179 students were in construction work and 167 students in survey. The graduates of these two specialties constituted about 59.2% of the total number of graduates in 19/1420H. Table (4-9) shows the number of students graduated from Technical Supervisors Institutes by specialties in 19/1420H.

Table (4-9)
Students Graduated from Technical Supervisors Institutes by Specialty in 19/1420H

S. No.	Institute	Con. Work	Arch. Drawing	S. Work	Survey	C. Con. Work	Total
1.	Riyadh	45	22	50	39	38	194
2.	Abha	31	7	31	25	*	94
3.	Tabuk	36	29	*	37	*	102
4.	Taif	19	15	*	52	21	107
5.	Onaiza	48	22	*	9	*	79
Grand Total		**179**	**95**	**81**	**162**	**59**	**576**

Source: GOTEVT, Statistical Report 20/1421H.

- This specialty does not exist.

The number of teaching staff at the Technical Supervisors Institutes during the academic year 20/1421H stood at 381 teachers. This number was distributed among different subjects, namely Religion, Arabic Language, Science, English Language, Computer, Physical Training and technical Subjects. The bulk of the staff members were technical Subjects teachers. The number of technical subjects, teachers was 311 teachers which constituted 81.2% of total number of teaching staff. Table (4-10) shows the number of teaching staff at Technical Supervisors Institutes by subjects in 20/1421H.

Table (4-10)
Teaching Staff at the Technical Supervisors Institutes by Subjects in 20/1421H

Subject	Institute					
	Riyadh	Abha	Tabuk	Taif	Onaiza	Total
Religion	4	3	2	2	2	13
Arabic	2	1	1	1	2	7
Mathematics	3	2	2	3	3	13
Science	4	3	2	2	2	13
English	3	2	2	2	2	11
Computer	0	1	0	5	2	8
Physical Training	1	1	1	1	1	5
Technical Subjects	114	63	44	42	48	311
Grand Total	**131**	**76**	**54**	**58**	**62**	**381**

Source: GOTEVT, Statistical Report 20/1421H.

4.1.2.4 Secondary Agricultural Institutes

The Agricultural Sector have witnessed rapid development in the last two decades of the twentieth century due to the continuous support this sector received from the government. To cope with this development and to satisfy the Agricultural Sector needs from qualified cadres, GOTEVT has opened four Secondary Agricultural Institutes in different parts of the Kingdom, namely in Buraida, Wadi Al Dawassir, Kharj and Jizan. These institutes aim at preparing students to take their role in the modern agricultural development and to work in government and private farms and agricultural projects. The duration of study in Secondary Agricultural Institutes is three years. The institutes accept graduates of intermediate schools and grant their graduates the Secondary Agricultural Institute Diploma in one of the following specialties:

- Plant Production
- Animal Production
- Agricultural Mechanization

The number of students registered at Secondary Agricultural Institutes in the Kingdom during the academic year 1420/1421H stood at 449 students. Buraida institute came in the first place in term of the number of registered students with 173 students. This number constitutes 38.5% of total number of registered students at Secondary Agricultural Institutes in the year 20/1421H. As far as the number of new enrolled students is concerned, the total number of new enrolled at Secondary Agricultural Institutes was 165 students in 20/1421H. Table (4-11) shows registered and new enrolled students at Secondary Agricultural Institutes in 20/1421H.

Table (4-11)
New Enrolled and Registered Students at Secondary Agricultural Institutes in 20/1421H

S. No.	Institute	New Enrolled	Registered
1	Buraida	49	173
2	Wadi Al Dawassir	44	81
3	Al Kharj	37	71
4	Jizan	35	124
Total		**165**	**449**

Source: GOTEVT, Statistical Report 20/1421H.

The number of students graduated from Secondary Agricultural Institutes in the academic year 19/1420H in above mentioned specialties stood at 203 students, of these 120 students were in Plant Production, 49 students in Animal Production and 34 students in Agricultural Mechanization. Table (4-12) shows the number of students graduated from Secondary Agricultural Institutes by specialties in 19/1420H.

Table (4-12)
Students Graduated from Secondary Agricultural Institutes by Specialty in 19/1420H

S. No.	Institute	Plant Prod.	Animal Prod.	Agric. Mech.	Total
1	Buraida	42	21	23	86
2	Wadi Al Dawassir	15	*	11	26
3	Al Kharj	*	28	*	28
4	Jizan	63	*	0	63
Grand Total		**120**	**49**	**34**	**203**

Source: GOTEVT, Statistical Report 20/1421H.

* This specialty does not exist.

The number of teaching staff at the Secondary Agricultural Institutes during the academic year 20/1421H reached 125 teachers. This number was distributed among different subjects, namely Religion, Arabic Language, Science, English Language, Computer, Physical Training and Agricultural Subjects. The most of the staff members were agricultural subjects teachers.

The number of agricultural subjects teachers was 93 teachers which constituted 74.4% of the total number of teaching staff. Table (4-13) shows the number of teaching staff at Secondary Agricultural Institutes by subjects in 20/1421H.

Table (4-13)
Teaching Staff at the Secondary Agricultural Institutes by Subjects in 20/1421H

Subject	Institute				
	Buraida	Wadi Al Dawassir	Al Kharj	Jizan	Total
Religion	4	1	1	1	7
Arabic	3	1	1	1	6
Mathematics	1	1	0	0	2
Science	2	1	1	2	6
English	3	1	1	1	6
Computer	0	1	0	0	1
Physical Training	1	1	1	1	4
Agr. Subjects	46	17	19	11	93
Grand Total	**60**	**24**	**24**	**17**	**125**

Source: GOTEVT, Statistical Report 20/1421H.

4.1.2.5 Major Problems Facing the Secondary Technical Institutes

After reviewing the present status of various secondary technical institutes in the Commercial, Industrial, Construction and Agricultural Education it was apparent that:

a) Commercial Secondary Institutes curriculum is newly developed to meet the labor market needs. Therefore, a follow-up study is needed to assess the graduates effectiveness on the job as a result of the said development.

b) The Industrial, Construction and Agricultural Secondary Technical Institutes face the following problems that affect their efficiency and effectiveness:

- The three-year period is too long for training of similar training.

- The curricula are not oriented toward certain skill levels according to set standards.
- The length of the period limits the utilization capacity of these institutes.
- A student can not leave these institutes with a recognized level of skill before finishing the three-year program.
- These institutes do not provide the labor market with different levels of skills.
- The cost incurred in developing this kind of institutes is not justified taking into consideration the graduates skill level and the number of those graduates.
- The curricula of the programs in these institutes are over burden with general education subjects, which causes most of the failures of the students. In addition to that, most of these general subjects do not relate directly to the technical specialization of the students. Such general subjects as high level physics, math, chemistry.
- No practical experience is provided for career awareness and career development.

4.2 Vocational Training Centers

4.2.1 Present Status

The first Vocational Training Center was established in Riyadh City in 1383H. The number of these centers was increased to reach 30 centers in 1410H, which are distributed in various cities in the Kingdom. Vocational Training Centers aim at qualifying local manpower needed to fulfill the Kingdom's requirement in various sectors.

Vocational Training Centers have morning and evening courses. The duration of the morning courses is 12 months, while the duration of the evening courses is 18 months. Courses provided in Vocational Training Centers are: Automobile, Carpentry, Welding, General Mechanics, Sanitary work, Air -conditioning and Refrigeration, Electronics, Metal Sheet, Printing, Office Machines, Aluminum, Diesel, Tailor, Barber, Fill, Computer, Photography, Construction and Industrial Electricity.

As shown in the Table (4-14), the number of trainees at Vocational Training Centers in the academic year 20/1421H was 11,111 trainees, of these 9,626 trainees were in the morning courses which constituted 86.6% of the total number of trainees at Vocational Training Centers, while the number of evening courses trainees was 1,485 trainees.

The number of graduated trainees at Vocational Training Centers in the year 19/1420H was 5,994 trainees, of these 3,866 trainees in morning courses and 2,128 trainees in evening courses.

The number of training staff at Vocational Training Centers in the year 20/1421H was 1,349 trainers, of these 203 trainers were in Riyadh First and Second Centers. The following table shows the opening dates, trainees, graduates and training staff at Vocational Training Centers in 20/1421H.

Table (4-14)
Trainees, Graduates and Training Staff at Vocational Training Centers in 20/1421H

S.N.	Center	Opening Date	Trainees			Graduates**			Training Staff
			Morning	Evening	Total	Morning	Evening	Total	
1	Riyadh (1)	1383H	890	181	1,071	381	299	680	118
2	Jeddah	1386H	1,020	187	1,207	438	235	673	106
3	Dammam	1386H	758	180	938	311	260	571	105
4	Buraida	1386H	486	85	571	184	125	309	86
5	Jouf	1391H	285	*	285	76	*	76	26
6	Abha	1392H	488	69	557	137	78	215	75
7	Hail	1395H	258	*	258	80	*	80	59
8	Medinah	1396H	536	99	635	145	101	246	82
9	Ahsa	1395H	445	92	537	199	117	316	76
10	Baha	1397H	297	*	297	125	50	175	29
11	W. Dawassir	1397H	102	*	102	63	*	63	24
12	Makkah	1398H	533	121	654	245	141	386	61
13	Tabuk	1398H	365	84	449	207	110	317	30
14	Qatif	1400H	425	*	425	202	*	202	42
15	Majmaa	1398H	76	*	76	36	*	36	21
16	Shagra	1399H	30	*	30	20	*	20	9
17	Rass	1399H	134	*	134	46	*	46	38
18	H.al.Batin	1400H	153	*	153	63	*	63	18
19	Laith	1400H	115	*	115	43	*	43	10
20	Namas	1401H	100	*	100	25	*	25	17
21	Kharj	1402H	212	50	262	85	73	158	28
22	Afif	1403H	91	*	91	26	*	26	9
23	Jizan	1403H	357	69	426	134	79	213	32
24	Assir	1403H	94	*	94	37	*	37	16
25	Najran	1405H	242	87	329	109	108	217	39
26	Wajh	1406H	85	*	85	45	50	95	16
27	Aflaj	1406H	84	*	84	28	*	28	12
28	Taif	1407H	432	*	432	144	106	250	52
29	Riyadh (2)	1408H	406	181	587	190	196	386	85
30	Bisha	1410H	127	*	127	42	*	42	28
Grand Total			**9,626**	**1,485**	**11,111**	**3,866**	**2,128**	**5,994**	**1,349**

Source: GOTEVT, Statistical Report 20/1421H.
* Center without evening courses this year
** In 19/1420H

4.2.2 Major Problems Facing Vocational Training Centers

During the course of this study it was apparent that the Vocational Training Centers face the following problems which affect their efficiency and effectiveness:

- The duration of the training programs is two years, which is too long. This will not allow the trainees to be graduated with diversified levels of skills in specialization.
- These centers have limited capacity utilization because of the length of the duration.
- These centers could not provide the Saudi labor market with the needed nationals with diversity of skill levels.
- Even though some of the trainees need to stay two years due to their age (15 years old), other trainees who are more than 15 years old do not need to stay two years to acquire certain level of skill to go to the labor market.
- Not every trainee has the mental and other capabilities to be upgraded to the top level (two years program).

Chapter Five
Proposed Reforms for Technical Education And Vocational Training

5.1 The Colleges of Technology

The colleges of technology are time based technical education. Students earn associate degrees from these colleges after completion of 90 credit hours. These 90 credit hours are to be completed within six semesters. The eight specialization taught in these colleges are

Associate Degree Programs	Bachelor Degree Programs
General	Mechanical Technology
Mechanical Technology	Electrical Technology
Electrical Technology	Electronic Technology
Electronic Technology	Industrial Chemical Technology
Computer Technology	
Industrial Chemical Technology	
Construction Technology	
Management Technology	

5.1.1 Curriculum

The current traditional time-based curriculum contains major amount of non-technical materials, which need to be carefully evaluated; e.g. the general education represents more than 40% of the curriculum which does not relate to skills development. Moreover, the current curriculum has broad-based specialization which do not produce the desired levels of skills needed for the labor market.

The duration of the Colleges of Technology Programs is currently three years, requiring 90 credit hours. Most international colleges of technology award associate degrees in technical areas in two years programs.

Studies have shown the need for a more focused effort on skill training. That finding is consistent with what has been found in many other countries such as Singapore, Australia, United States, United Kingdom, Canada, Malaysia, South Korea and Japan.

Those countries realized the need to have their Colleges of Technology focus more attention on Technical Skills and less on general studies. By focusing their programs on Technical Skills they have also found that two years is adequate time to prepare a technically competent worker. Table (5-1) provides an overview of how some of these countries have organized their Colleges of Technology and technical programs.

GOTEVT should have the Colleges of Technology curriculum designed for the duration and content in consistent with the international models, to improve their efficiency. This can be achieved using the following mechanisms:

5.1.1.1 Design the Colleges of Technology Programs for two years (four semesters) of sixty-five credit hours for each program. Courses in the various training programs need to be divided among: general courses (30%), technical core courses (30%) and the specialized technical course work (40%), in order to be similar to other international training institutions, Table (5-1).

The reduction of the duration from three to two years will improve the efficiency of the utilization capacity of these colleges.

5.1.1.2 Design the general courses to include courses similar to those in higher education institutions, in the Kingdom i.e. college requirements, Islamic Studies, Arabic Language, Mathematics, Science and English language, but these courses should be taught in an applied manner using examples that are related to the technical field being studied.

5.1.1.3 Design technical core courses to include those common skills and knowledge in each area of specialization.

5.1.1.4 Place cooperative education as a transition to employment for trainees. It should take place during the summer vacations through and after the successful completion of training programs. The first summer should be dedicated to career awareness, which should have two credits, assigned to it. The second summer should be dedicated to career development which should have three credits assigned to it.

Table (5-1)
Analysis of General Education Requirements: Selected International Programs

Technical College Program	Country	Total Number Hours/Courses	General Studies %	Technical Core	Technical Skills	Additional Contents	Comments
Electrical Engineering	MARA Institute Malaysia	60*	12	20%	18	30	
Automotive	South Dakota Tech. College United States	69	20	29%	N.A	49	
Electronics	Australia	60	Integrated		10	50	General education is integrated
Electrical	Australia	60	Integrated		13	47	General education is integrated
All technical Programs	Singapore	30-90		10%	20-60%	30-70%	*Most programs are* two years in length
Air Conditioning-Refrigeration	Canada	62*	14	23%	6	42	
Printing	Wisconsin United States	68	15	22%	13	40	

*** All hours have been reported in semester hours.**

Some nationals use quarter hours. For purpose of this report they have been converted to semester hours

5.1.2 The Regional Distribution of the Colleges of Technology

GOTEVT programs should be designed to help achieve the economic objectives of the Kingdom. Regional Development has always been one of the strategic objectives of the Kingdom Development Plans.

The skills and knowledge needed for success vary greatly from one region to another. For example, those needed in agriculture are quite different than those needed in industry.

Therefore, to help fulfill the Kingdom economic objectives, the GOTEVT programs must match the requirements of the labor market in each region. That is to say industrial regions need industrial training and agricultural regions need agricultural training.

Most Industrialized nations do extensive labor analysis of all regions for the purpose of determining what Technical and Vocational Programs should be offered in each of them. In America, for example each State has an Office of Economic Development. One of its major responsibilities is to study and analyze the labor market to determine the kind of training it needs. Throughout the European Union similar offices exist for this purpose. In South Korea and Singapore the Department of Labor takes over this responsibility.

The example of distributing the Colleges of Technology is presented in Table (5-2). This suggestion is based on the major economic activities in the said cities.

Table (5-2)
Present and Suggested Specialties for Colleges of Technology

S.N.	Name of Colleges	Present Specialties	Suggested Specialties
1	College of Technology at Riyadh	Business & Industrial	Business &Industrial
2	College of Technology at Jeddah	Business & Industrial	Business &Industrial
3	College of Technology at Dammam	Business & Industrial	Business &Industrial
4	College of Technology at Buraidah	Business & Industrial	Business & Industrial
5	College of Technology at Abha	Business & Industrial	Business & Industrial
6	College of Technology at Ahsa	Business & Industrial	Business & Agricultural
7	College of Technology at Madinah	Business & Industrial	Business &Industrial
8	College of Technology at Hail	Business & Industrial	Business & Agricultural
9	College of Technology at Baha	Business & Industrial	Business & Agricultural
10	College of Technology at Makkah	Industrial	Business & Industrial
11	College of Tele. & Infor at Riyadh	Information Technology	Information Technology
12	College of Tech. Elector at Jeddah	Information Technology	Information Technology
13*	College of Technology at Buraidah	Agricultural	Business & Agricultural
14*	College of Technology at Tabuk	New	Business & Agricultural
15*	College of Technology at Najran	New	Business & Agricultural
16*	College of Technology at Jazan	New	Business & Agricultural
17*	College of Technology at Jouf	New	Business & Agricultural

* Newly opened colleges.

The suggested program for the Colleges of Technology in business and agriculture could include the following specialization:

a) **Food Industry**
b) **Cooling, Freezing and Cereal Storage Industry**
c) **Dairy Products Industry**
d) **Poultry Products Industry**
e) **Agricultural Equipment Maintenance and Operation**
f) **Farm Management**
g) **Agricultural Marketing**

h) Agricultural Cost Accounting
i) Agricultural Equipment, Materials and Products Distribution Centers' Management
j) Application of Agricultural Works on Computer in Production, Storing and Marketing.... etc
k) Agricultural Extension
l) Green Houses Operation and Management
m) Food Health and Safety Management

An extensive work is needed to reshape the Colleges of Technology, which necessitates the following actions:

5.1.2.1 Regional field investigation of Business, Industrial, Agricultural and Construction activities should be conducted in order to define the specialization needed in the college curriculum of that region.

5.1.2.2 Setting up the Skill Standards needed from the types of the manpower needed in that region according to economic activities.

5.1.2.3 Developing the curriculum needed in each specialty area according to these Skill Standards.

5.1.2.4 Developing the teaching and training materials for Skills, Knowledge and Attitude needed by the Skill Standards.

5.1.2.5 Assuring the availability of the essential instruments and tools needed for teaching and training, taking into consideration the full utilization of the available facilities in Business, Industrial and Agricultural projects. That is to avoid acquiring expensive machinery and tools, which could be utilized through cooperative training programs.

5.1.3 Proposed Credits

In order to increase the efficiency of the Colleges of technology in graduating trainees at reasonable short duration, it is needed to apply the following breakdown of the requirements of the Industrial Training Program.

The required total credit hours for a diploma should be 65 credit hours. This should be distributed as following:

- Eighteen credits should be allocated to theoretical subjects.
- Eighteen credits should be allocated to the general technical core courses.
- Twenty-four credits should be allocated to the specialized technical core courses.
- Five credits should be allocated to two summers of cooperative training programs. Two credits in the first summer will be devoted to career awareness, while the second summer will be devoted to career development for three credits.

5.1.4 Form of Registration

Registration of trainees in the Colleges of Technology has to be performed in light of the following:

- Trainees must register not less than twelve hours per semester from the already designed list of courses for their respective lines of specialization.
- Trainees do not have options and/or choice in courses registration. They have to stick to the assigned lists of subjects and the sequences of the subjects during registration in each semester for each line of specialization. The core courses will enable the students to make changes early in their program without loss of credits or time.

- Trainees who fail in some subjects, have to add some courses to keep their loads not less than twelve credits at all times.
- Trainees are not allowed to drop and/or add any subject.
- Trainees must keep an accumulative grade point average of not less than two out of five points.
- If any trainee receives two consecutive warnings, he will be allowed one more semester in the college to improve his accumulated grade point average standing.
- Trainees who fail to keep an accumulated grade point average of two in three consecutive semesters shall be dismissed from the college.
- Trainees who get dismissed from the college have the choice to join in a Technical Training Center to develop their skills in the field of his interest for one session or more.
- Trainees are allowed to spend four years maximum in the college to get their diplomas.
- Trainees will lose all their financial benefits and remuneration after two years from the date of their enrolment in the college.

5.1 5 The Technical Training Program

This program should be adopted by the Colleges of Technology and will have the following characteristics:

- It consists of four sessions, each session last for six months: Four and a half months devoted to in-college-training and the rest one and a half month is devoted to Cooperative Training for career development.
- Each session is independent of the other so that after each session the graduate could go to the labor market being equipped with certain level of proficiency according to a skill standard.

- The session constitutes a serial of progression in that profession. That is for one to take session three he has to take session two before taking session three, unless one proves his proficiency level based on competency assessment.
- The graduates of this program are labeled according to the developed Skill Standards in that profession.
- Specialties in this program are determined according to the regions' need of manpower and according to the economic activities in that region.
- More session could be developed over time for more advancement in a specific profession. That could be done according to the advancement in that profession and to the demand by professionals.
- Only secondary school graduates and the dropouts from Colleges of Technology and universities would be accepted in this program.
- The curriculum for training in this program should consist of 20% general courses and 80% technical skills and knowledge. The general courses should be devoted to work ethics and behavior in the light of Islamic teachings, the development of reading, writing in an applied context. Certain professions may need advanced Mathematics and Sciences, which should be provided to those who need them only. All aspects of the curriculum development for each level and for each profession should be tied to the Skill Standards.

5.1.6 The Effect of the Reform

The above mentioned reform of the Colleges of Technology will improve their efficiency as follows:

- It will improve the utilization capacity by 30%, as it became two years rather than three years.
- The emphasis on technical skills and knowledge in the curriculum will graduate better skilled manpower (improved effectiveness).
- The emphasis in the general courses on the applied context will relate the general education more to the technical development.
- The two years program will make it more attractive for students to go to the Colleges of Technology, especially those who want to join the labor market.
- The technical training program at these colleges will absorb the secondary school graduates who could not be admitted to the normal program of the colleges of technology, universities or other higher institutions, and it will absorb also the dropouts of the higher educational institutions. This will improve the efficiency of the utilization capacity of the colleges of technology, because not all trainees in this program will finish the four sessions. This in and out flexibility in the program will allow more trainees to be admitted.

5.2 Secondary Technical Education

It was apparent that Secondary Technical Education in the areas of Industry, Agriculture and Construction lack the efficiency needed for each type of education. This is due to the following reasons:

a) The three – year period of education is too long.

b) The level of skills the graduates obtain during these types of education is low compared with similar training efforts.

c) The low acceptance of the business sector of the graduates from these institutions, due to the low level of skill development.

d) The inability of the students who did not finish the three years program to be liable for a skill level.

e) The high cost of establishing such institutions compared to its utilization capacity, Table (5-3).

f) The obstacle of the general courses injected in such curricula, which is at the expense of knowledge and skills development, related to the technical area of specialization.

g) The lack of practical field training for career awareness and career development and employability.

Taking into consideration the above mentioned reasons and due to the extreme need for better utilization capacity of GOTEVT institutions in order to absorb the influx of unskilled manpower entering the labor market in increasing number every year, the Secondary Technical Institutes should be reformed to Vocational Training Institutes as it will be shown in item 5.4.

Table (5-3)

Cost of Vocational/Technical VS. Academic Schools

Cost per Student to Build/Equip.	School	Location
29,983	Vocational High School	Johnston, New York USA
15,986	Comprehensive High School*	Johnston, New York, USA
33,871	Technical College**	North Carolina, USA
14,007	Community College**	North Carolina, US
42,804	Canadian Vocational High School* (CN$)	Abbottsford, British Columbia
20,141	Canadian Comprehensive High School (CN$)	Abbottsford, British Columbia
265%	Technical College	Mid Kent, Great Britain
100%	Academic College	Kent, Great Britain

* Includes auditoriums and sports complex

** Does not include dormitories

5.3 Vocational Training Centers

The current training at the Vocational Training Centers is for one and two years. It was felt that these centers need to be modified in order to improve their efficiency for the following reasons:

- Most of the programs are for two years that is too long period to train for certain levels of skills. For example, in the mechanical field several levels of skills are needed in this field. Then, why a trainee is to last for two years in order to become certified for an imposed level of skill?
- Most of the admitted trainees are either intermediate or secondary school dropouts. Some of them are of age 16 and above who may need one year (two sessions) to graduate and go to the labor market. This could not be attained in a strict two years program.
- The programs are not tied-up to Skill Standards, therefore, they will be graduated with different levels of skilled manpower.
- The programs are not necessarily related to the regions' needs, therefore, some graduates could not find jobs in their regions after graduation from these colleges, when there are certain jobs in the region to be filled with graduates of different skills.
- Better utilization capacity could be attained if different levels of skills could be certified and graduated.

5.4 Vocational Training Institutes

For the previously mentioned reasons, and in order to improve the efficiency of the Vocational Training Centers and the Secondary Technical Institutes, they should be reformed to be Vocational Training Institutes consisting of four sessions instead of one year and two years. The period of each session is six months. Four and a half months for general and vocational preparation and one and a half-month for cooperative program for career awareness and development. The four sessions are as follows:

5.4.1 Session One

In this session the following trainees can enroll:

- Elementary school graduates and dropouts.
- Intermediate school graduates and dropouts.
- Secondary school dropouts.

In this level, the curriculum is designed in such a way to have training of 40% which is related to vocational parts of a specific trade or specialization, while 60% is devoted towards general education.

The general education includes Islamic Cultures, Arabic, Reading, Writing, Mathematics, English, and Computer literacy. In the general studies part, the practical aspects and contents of the reading, writing, Math and English subjects should be devoted only towards vocational materials that are related to a specific trade or specialization.

Trainees who successfully complete this session are labeled as vocational level one.

5.4.2 Session Two

In this session the following trainees can enroll:

- Graduates of Session One and the Ones who Proved their Level of Proficiency According to Competency Assessment:

  Again in this level the curriculum is developed to have a training of 40% which is related to vocational aspects of a specific trade or specialization. The general studies part, on the other hand, represents 60% of the curriculum.

  In this session, the general subject should be devoted to building up higher levels of knowledge and skills in reading, writing, Mathematics, Islamic Cultures, Arabic, and English, and Computer literacy. For example, in the Islamic Culture subject, the following topics should be emphasized:
  respecting time, work ethics and behavior, human relations, honesty, and respect of manual work and blue colored jobs. That is through recitation of Islamic verses and teachings.

  The graduate of session two are labeled as vocational level two.

5.4.3 Session Three

In this session the following trainees can enroll:

- Graduates of session Two and Those who Proved their Level of Proficiency According to Competency Assessment:

  The curriculum of this session is divided into general education, which represents 40%, and vocational training, which represents 60%.

  The general education aspects are devoted to higher level of knowledge and useful skills in Islamic Cultures and Arabic, Reading, Writing, Math and English. For example, in Islamic Culture a trainee may be trained on the effective domain to appreciate the profession in light of Islamic values and teachings. Vocational part of the training is devoted to further development of the skills and knowledge, which were gained in session two in that specific profession or trade. Trainees who complete successfully this session are labeled vocational level three.

5.4.4 Session Four

In this session the following trainees can enroll:

- Graduates of Session Three and Those who Proved their Level of Proficiency According to Competency Assessment:

  The curriculum of this session is divided into general education, which represents 30%, and vocational training parts, which represent 70%.

The general education aspects would be limited and devoted to higher level of knowledge and useful skills in Islamic Culture, Arabic, Reading, Writing, Mathematics and English. For example, in Islamic culture trainees may be trained on the effective domain to appreciate the profession in light of Islamic values and teachings. Technical training will be devoted to further development of the skills and knowledge which were gained in session three in that specific profession or trade. Vocational parts may also include training on a new trade or specialization, which the trainees did not gain in session three. Trainees who complete successfully this session are labeled vocational level four.

The trainees who are admitted to the Vocational Training Institutes come with low academic background. It is expected to enter the labor market yearly around 18,000 and 28,000 with primary and intermediate background respectively. They will be needing both general education as well as vocational preparation, therefore, the curricula at the Vocational Training Institutes should put emphasis on general education oriented to ward ethic and work behavior, and building on the three Rs (Reading, Writing and Arithmetic), taking into consideration that these group are failing general education and should not confront it in the same previous manner.

5.4.5 The Effect of the Reform

The above mentioned reform of the Vocational Training Centers will improve their efficiency as follows:

- Shorter duration of training time will improve the utilization capacity of these centers, as some trainees will leave the center after one, two or three sessions instead of staying for one year or two years at present time.

- The labor market will receive different levels of Saudi skilled workers.
- The trainee according to his needs and level of proficiency will enroll in these sessions. He can leave after session one and go to the labor market. Then he can come back after a period of time to enroll in the next session or sessions to be certified for that level.
- The institutes should be opened for two shifts, morning shift and evening shift for the same programs. That is to improve its efficiency (utilization capacity) and to keep unified standardized level of skilled manpower according to the set skill standards.
- GOTEVT should concentrate its programs of education and training on the Industrial, Construction and Agricultural areas of specialization which the private sector seems not to get into in comparison with business education and training.

  That is apparent looking to the number of private education and training institutions which amounted to 293 institutes and centers in the area of Business Education and Training which represent more than 83% of the total number (352) of private institutes and centers, Table (5-4). This is also supported by the number of business education graduates, which amounted to 18,676 graduates representing 91% of the total number of (20,424) graduates, from the private institutes and centers, Table (5-5).

Table (5-4)
Institutes at Private Institutes and Centers by Specialties – 1420/1421 H

Specialty												
Computer	Commercial Sciences	Electronics	Automobile Mechanics	Automobile Electricity	Industrial Safety & Security	Aero-Sciences	S.T.I.**				Diploma ***	Grand Total
							Commercial	Industrial	Supervisors	Total		
241	16	6	2	2	3	2	34	1	2	37	43	352

Source: GOTEVT Statistical Report 20/1421H.

** Secondary Technical Institutes

*** Diploma after Secondary Stage

Table (5-5)
Graduates at Private Institutes and Centers by Specialties – 1420/1421 H

Specialty												
Computer	Commercial Sciences	Electronics	Automobile Mechanics	Automobile Electricity	Industrial Safety & Security	Aero-Sciences	S.T.I.**				Diploma ***	Grand Total
							Commercial	Industrial	Supervisors	Total		
10329	2619	31	39	14	29	24	5728	39	84	5851	1488	20424

Source: GOTEVT Statistical Report 20/1421H.

** Secondary Technical Institutes

*** Diploma after Secondary Stage