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ABSTRACT

One of a series of studies on the development of technical and vocational education in the member states of UNESCO, this report profiles the educational system in the Republic of Korea. The five parts of the document provide information about the following: education in Korea; the technical vocational education training (TVET) systems, programs, and statistics in Korea; TVET supporting systems and activities; key TVET-related offices, organizations, and professionals; and the present situation and future challenges of the Korean TVET. Some of the highlights are as follows: (1) until the second half of the 20th century, Korea was largely an agrarian society poorly endowed with national resources; (2) great strides in economic development since the 1950s have spurred an increase in education and an aim to educate workers for high technology; (3) the education system consists of 6 years of primary school, 3 years of junior high school, 3 years of high school, and 4 years of college; (4) approximately 95 percent of students go to high schools, with about one-third of the high schools being technical schools; (5) students from any high school course can apply for college; (6) the larger portion of educational finance is dependent on governmental support and student tuition; (7) TVET programs under the formal education system are provided in high schools and junior colleges; (8) vocational training programs administered by the Ministry of Labor usually last 3-12 months; (9) 233 different courses of study are offered in vocational areas in junior colleges; and (10) short-term training programs are provided by local governments. (The bibliography contains 11 references.) (KC)

NATIONAL PROFILES IN TECHNICAL AND VOCATIONAL EDUCATION IN ASIA AND THE PACIFIC

Republic of Korea

UNEVOC
International Project on Technical and Vocational Education

NATIONAL PROFILES IN TECHNICAL AND VOCATIONAL EDUCATION IN ASIA AND THE PACIFIC

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UNESCO PRINCIPAL REGIONAL OFFICE FOR ASIA AND THE PACIFIC, BANGKOK, 1995

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FOREWORD

Technical and vocational education has always been an important component of UNESCO's consecutive Medium Term Plans. The basic objective of this programme is to support the efforts of Member States to link education systems more closely to the world of work and to promote the expansion and improvement of technical and vocational education in the light of changing employment needs.

The Colombo Plan Staff College for Technician Education (CPSC) also dedicates itself primarily to enhancing the growth and development of the technician education systems in its member countries which are located in the Asia and Pacific region. Its programmes, projects and activities are geared to provide the needed impetus for the professional development of senior level personnel involved in technician education development efforts.

UNESCO has launched an International Project on Technical and Vocational Education (UNEVOC) as of 1992 in co-operation with the Government of Germany, ILO, FAO, UNDP and NGOs interested in the reform of technical and vocational education. This project focuses on exchanging information, research and experiences on policy and programme issues in technical and vocational through a network of co-operating institutions.

In a spirit of co-operation between UNESCO and CPSC, under UNEVOC, an attempt is being made to compile and publish studies on the development of technical and vocational education in Member States in the form of TVE profiles of 21 countries. It is hoped that this series will serve as a handy reference information on TVE systems, staff development, technical co-operation and information networking. These studies have been possible because of the full co-operation to UNESCO PROAP and CPSC by all concerned in the Member States.

The opinion expressed in this study are those of the authors and do not necessarily reflect the position of UNESCO and CPSC in this regard. This profile on the Republic of Korea was prepared by Prof. Young-Hwi Lee, Seconded Faculty Member to CPSC by the Government of Republic of Korea.

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Director, CPSC

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Director, UNESCO PROAP

Part I

INTRODUCTION

1.1 An Overview of the Republic of Korea

Located east of the Asian Continent, Korea is a democratic state with five thousand years of history. Korea belongs to the north temperate zone, but its climate is both continental and monsoonal showing four distinctive seasons with a wide range of differences in temperature between summer and winter under the influence of the continent and seas surrounding the Korean peninsula. Summer lasts from June to August, the monsoonal climate brings 50-60 per cent of the annual precipitation of about 1,200 mm. Its winter, from December to February is generally cold and dry with occasional heavy snow and northwesterly winds. In between these extremes, the spring is mild and the autumn is cool and serene with high skies.

Ethnically, Koreans belong to the Mongolian race and they are homogeneous race speaking one language with their own culture and customs which differ from those of their nearest neighbours, China and Japan. They also have their own unique Korean phonetic alphabet, the Han-Gul, which is regarded as one of the most original and yet the most scientific of phonetic writing system.

The total area of the Korean peninsula is approximately 220,000 km^2 (85,000 sq miles), which is a little smaller than Great Britain. The peninsula is divided into the Republic of Korea in the South and North Korea in the north by the demilitarized zone at roughly 38° parallel Latitude north of equator. Republic of Korea covers 45 per cent of the Korean peninsula (99,000 km^2) in size, a little more than twice the size of Switzerland and its population is about 43 million with an annual population growth rate of 0.92 per cent as of July 1991.

Approximately 70 per cent of the peninsula is mountainous, particularly in the north and along the east coast of the peninsula.

Administratively, the Republic of Korea is consists of nine provinces and one special Metropolitan District of Seoul: there are five metropolitan cities, 67 cities and 137 counties in the nine provinces.

Until the first half of the 20th century, Korea had remained an agrarian society poorly endowed with natural resources. In the absence of natural endowment, Korea launched a series of ambitious five-year socio-economic development programmes beginning 1962.

In addition, the government initiated the "Saemaul (New Village) Movement in 1970 to modernize rural areas through the inculcation and internalization of the spirit of "diligence, self-help and co-operation". Their successful implementation of

the successive socio-economic development programmes has placed Korea among the leaders of the newly emerging industrialized countries. As of 1992, the per capita GNP of Korea was $6,749 with a total GNP of $294.5 billion.

The rapid economic development has brought about far reaching social changes such as the breakdown of class barriers and increase of demographic mobility. The urbanization of the population has been pronounced, the occupational diversity has been drastically increased, and there has been a considerable rise in the general standard of living and education.

Korea is aiming at becoming a highly technological industrial society as well as a sound welfare society by the year 2000 by putting continued emphasis on the nurturing of its people's potentialities, development of science and technology and enhancement of industrial competitive edge in the pursuit of internationalization of its economy and opening the country to foreign dealings.

1.2 Introduction to Education in Korea

A. Educational System

1. An Overview

The Korean Education Law promulgated in 1949 provides for a 6-3-3-4 school system; 6 years for primary school, 3 years for junior high school, another 3 years for high school and four years of college or university.

Junior college education which can be taken after senior high school offers 2-3 years of education. See Figure-1 for details of Korean Education System.

The academic year consists of two semesters; the first semester begins on 1 March and ends on 31 August, while the second semester starts on 1 September and ends at the end of February the next year. Refer to Table 1 for the details on number of schools, student enrolment and number of teachers for various level of schools and higher educational institutions..

In the year 1992, there were a total of 11,501,027 students attending 19,693 schools and colleges.

2. Pre to Secondary Education

a) *Pre-school education*

Pre-school education is provided by kindergartens for children aged 4-5. At present, more than 40 per cent of eligible children are enrolled in kindergartens.

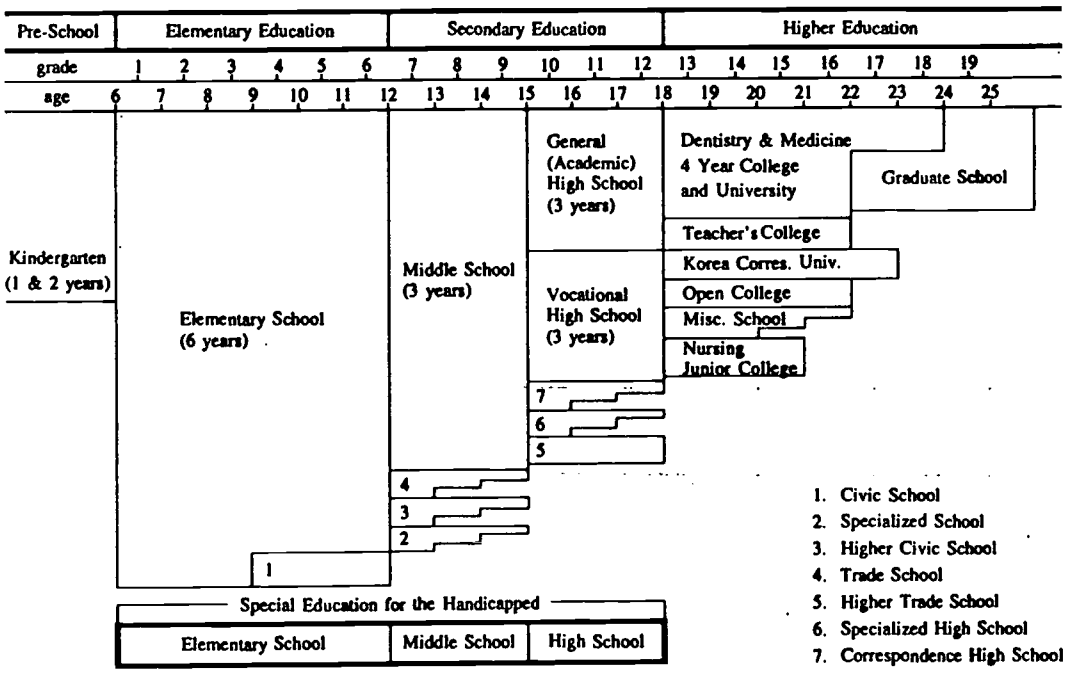
The kindergarten education aims at providing an appropriate environment for the social and verbal ability development as well as cognitive, affective and psychomotor ability of the children

enrolled. There were 8,526 kindergartens with the enrolment of 263,562 throughout the country in 1992.

b) *Primary education*

The 6 years of primary school education are compulsory and free for children from 6-12 years of age. Its goal is to provide basic skills and general education essential for understanding Korean culture and civic life in modern society. Nearly 100 per cent of those eligible attend primary schools. There were 4,561,078 pupils enrolled in 6,122 schools in 1992 throughout the country.

Figure 1. Education System in Korea



c) **Junior high school or lower secondary education**

Junior high school education is offered for students aged 12-15 and it is three years in length. All applicants from elementary schools are accepted and allocated by lottery to schools within their residential districts. 99.8 per cent of all primary school graduates moved on to junior high schools in 1992. Junior high school education is free only in rural areas, and in the near future it is to become compulsory and free for all.

There were 2,548 Junior high schools providing 3 years of education for 2,336,206 students throughout the country in 1992-93.

Table 1. Current Status of Schools in Korea

Classification	S C H O O L S						
Grand Total	Total	National	Public	Private	Class or Depart-ments	Students	Teachers
Grand Total	19,693 (1,347)	170 (1)	13,478 (1,331)	6,045 (15)	234,371	11,501,027	396,034
Kindergarten	8,526	1	4,593	3,932	15,576	263,562	21,117
Elementary School	6,122 (1,254)	17	6,029 (1,254)	76	112,811	4,561,078	137,819
Junior High School	2,539 (44)	9	1,827 (44)	703	48,046	2,336,206	93,439
Academic High School	1,071	11	470	590	28,720	1,416,004	58,178
Vocational High School	664	3	373	288	14,622	707,617	37,030
Special School	103	3	30	70	1,896	20,690	2,992
Civic School	1	-	-	1	3	150	4
Civic High School	10	-	1	9	28	480	66
Trade School	1	-	-	1	1	22	2
Trade High School	26	-	-	26	439	21,377	583
Miscellaneous School (Junior HS Level)	9	1	0	8	98	5,296	179
Miscellaneous (HS Level)	28	2	5	21	556	28,332	896
Air & Correspondence HS	50	-	50	-	568	28,578	-
Junior Colleges	126	13	-	113	1,365	408,398	10,119
Teacher's Colleges	11	11	-	-	350	16,019	693
Colleges & Universities	115 (16)	23 (1)	1	91 (15)	4,140	1,052,140	35,175
Air & Corres-pondence Univ.	1	1	-	-	14	163,433	142
Open Universities	8	5	-	3	163	57,381	993
Graduate Schools	316	66	4	246	3,217	91,304	-
Open Graduate Schools	5	3	-	2	23	379	-
Miscellaneous Schools (College Level)	20	-	-	20	113	22,449	410

*Note: The number of professors in graduate schools is included in that of colleges and universities.

Source: Education in Korea, 1992-1993, Ministry of Education

d) High school or upper secondary education

High school education is for the students aged 15-18 and it is also 3 years in length. The three years of course of study is financed mainly by the tuition and fees paid by the students.

There were a total of 1,735 high schools throughout the country in 1992 and of the 1,735 high schools, 664 were vocational high schools. Among the 1,735 high schools, there are some special high schools which offer specialized courses in arts, foreign languages, physical education and science.

Some of the talented students may receive scholarships for their tuition and other expenses.

Regardless of the educational streams, academic, vocational or special, all senior high school students may sit for college or university entrance examinations as they wish.

Nationwide high school entrance examinations are administered by respective provincial or municipal boards of education to allocate or assign students to schools within the students' residential districts for those who have passed the nationwide high school examination.

In 1992, 95.4 per cent of junior high school graduates went on to high school.

3. Higher Education

Under the education law and related presidential and ministerial decrees, all higher educational institutions, whether national, public or private come under the direct or indirect supervision of Ministry of Education. The Education Ministry guides and controls such matters as student quotas by academic fields, teaching staff qualification etc. The institutes of higher education are divided into five categories: (a) Junior colleges, (b) Colleges and universities, (c) Open universities, (d) Air and correspondence university, (e) Teachers' colleges

a) ***Junior college education***

As of 1993, there are 128 junior colleges, 8 national and 120 private. The total student enrolment was 344,970. Most of the junior colleges offer 2 years of vocational and technical education. The fisheries and maritime colleges offer 2 1/2 year programmes and the nursing 3 years.

Junior colleges select students based on the students' composite score of the National College Entrance Competency Test score and the weighted score of high school scholastic performance results of individual student.

b) ***College or University Education***

As of 1992, there were 121 four year colleges and universities (24 national and 97 private) and the total student enrolment was 818,153. Colleges and universities provide programmes leading to bachelor's, master's and doctoral degrees in various fields of study. A number of colleges and universities have programmes in medicine and dentistry and these programmes last six years for

bachelor's degree. The colleges and universities have 337 affiliated graduate schools with a total student enrolment of 87,514 in 1992. The student selection method of colleges and universities is the same as the junior colleges. Other than the 121 colleges and universities, there are 11 primary school teacher training colleges (4 years) with a total student enrolment of 16,019.

4. Non-formal Education

Non-formal education includes semi-formal vocational education, vocational training and cultural education. Semi-formal education is practised at schools which are founded by non-formal educational foundations; trade-junior high schools and high schools, civic junior and senior high schools, night classes affiliated with industrial firms, air correspondence high schools, the college degree acquisition programmes through independent studies, Air and Correspondence University and open universities.

As of 1992, 24,000 students were enrolled at 50 air and correspondence high schools in 28 areas. The Air and Correspondence University enrolment was 163,433 in 1992. 50,416 students were enrolled at 8 open universities throughout the country. The open universities accept applicants with high school diploma or equivalent educational background. Those with one-year or more work experience at factories and graduates of vocational high schools are given priority in admission according to university regulation

College degrees can also be sought through independent studies. Those who have high school diploma can be conferred bachelor's degree when they have passed a series of state-governed qualifying examinations and the degree is treated as equal to a regular degree granted by colleges and universities.

B. Teacher Education and Training

Primary school teachers are trained at the 11 teacher's colleges which offer 4 years of teacher training programme throughout the country and at the Department of Primary Education of the Korea National University of Education.

Secondary school teachers are trained at colleges of education and at departments of education of various colleges and universities including Korea National University of Education.

Some colleges and universities also offer teaching certificate programmes in order to provide teaching job opportunities for the graduates. The graduate schools of education of various universities are also a source of teacher training.

To be employed as teachers upon completing teacher training courses and programmes at colleges and universities, all graduate applicants are required to take a public screening test governed by respective regional boards of education.

In-service training programmes for teachers are offered in four different categories:

a) qualification training to get credits for promotion (180 hours);
b) general training to broaden overall knowledge in educational theories and practices (60 hours or more);
c) orientation training for new recruits to make them acquainted with the profession;
d) refreshment training for the enhancement of teachers' performance.

Graduate school of education of major universities and the Korea National University of Education also offer Master's degree programmes in various fields of discipline for the upgrading of in-service teachers.

The Central Educational Research and Training Institute under the Ministry of Education provides refreshment training for teachers, educational specialists and administrators of different regions.

C. Educational Administration and Financing

1. Educational Administration

The administrative organizations responsible for education are the Ministry of Education at the national level, and Municipal or Provincial Boards of Education at the regional level.

The Ministry of Education assimilates and adjusts educational policy measures, compiles and authorizes textbooks, provides administrative and financial support to schools, guides district educational administrative bodies, and operates teacher education systems.

Headed by the Minister and Vice Minister, the Ministry has three branch offices and five bureaus: Planning and Management Office, Supervision and Textbook Compilation Office, University Education Office, Elementary and Secondary Education Bureau, Teacher Affairs Bureau, Science and Technology Education Bureau, Non-formal and International Education Bureau and Education Facilities Bureau.

The Science and Technology Education Bureau is responsible for the administration of vocational technical education at secondary and post-secondary level schools and colleges.

A board of education at municipal or provincial level is an autonomous regional body looking after the educational affairs of the pre-primary, primary and secondary schools.

A municipal or provincial board of education has a superintendency as an executive body headed by the Superintendent and an Education Committee as a legislative body that makes major decisions on education, science and art.

As of 1992, there are 15 municipal or provincial boards of education as well as 179 local education offices throughout the country.

As for educational advisory organizations, the Central Educational Council and the University Educational Council assist the Minister of Education, while the Commission on Educational Policy advises the president.

2. Educational Financing

The educational finance in Korea consists of the central government budget, the regional or local government budget and the financial resources of private schools. The larger portion of educational finance is dependent on governmental support and student tuition and contributions from school foundations and private sector are relatively marginal.

The major sources of national educational budget is internal revenue. In 1992, the educational budget was $10.3 Billion (to 8,206,300 million won) which was 22.7 per cent of the total government budget.

The budget comprises operational expenditures of the Ministry of Education, national universities, research institutes, and grants for local educational finance (57 per cent) to support elementary and secondary education of various provinces and regions.

The major sources of revenue for the provincial or regional educational budget is government grants.

On the other hand, the major sources of financing private education are students' tuition and enrolment fees. In 1990, the entrance and tuition fees accounted for approximately 70 per cent of the total revenue of private schools.

As of 1991, private schools accounted for 69.3 per cent of kindergartens, 28.6 per cent for primary schools, 61.7 per cent for high schools and 78.3 per cent for colleges, and universities or higher education in terms of student population.

Figure 2. Organization of the Ministry of Education

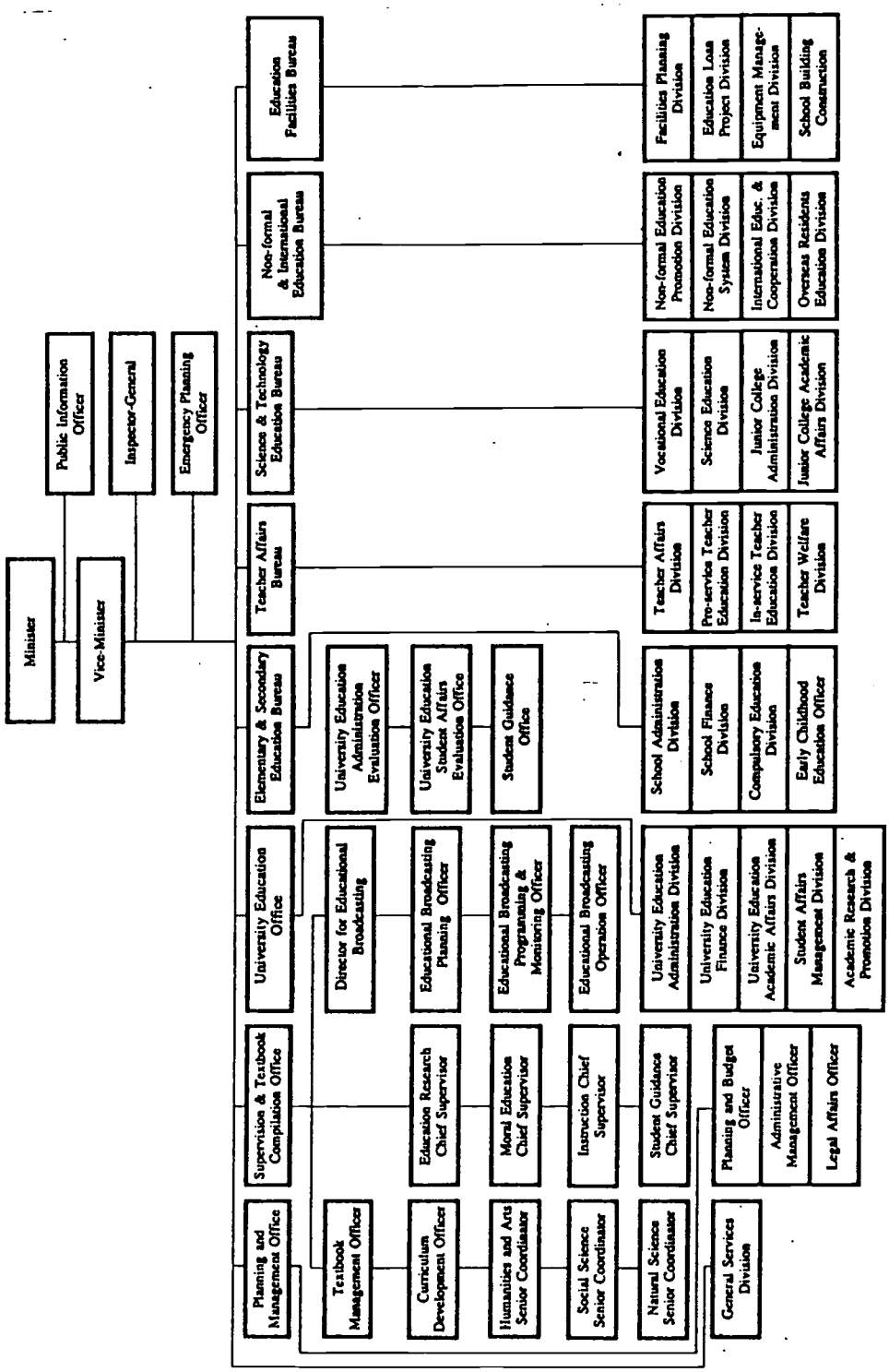
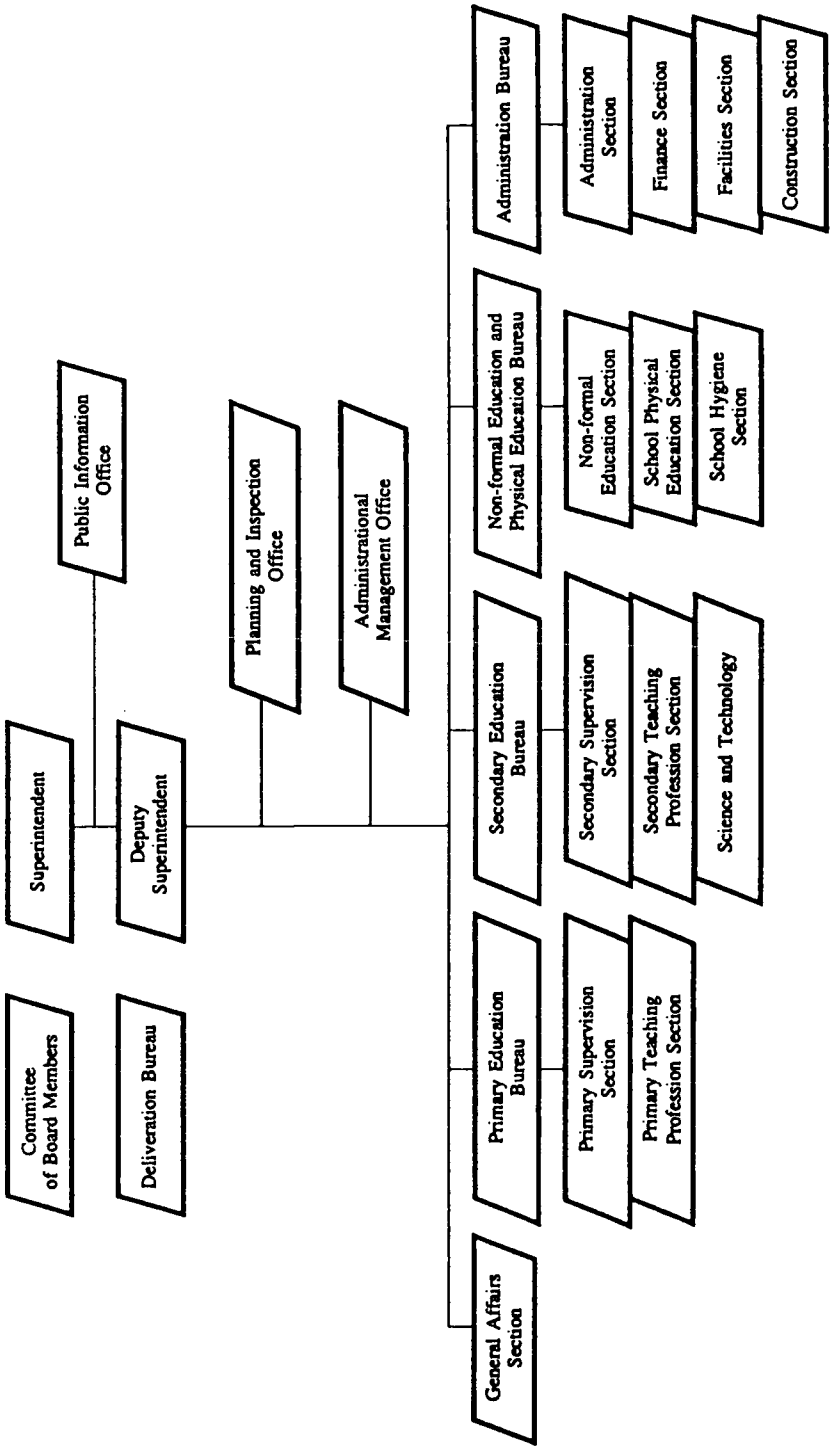


Figure 3. Organization of Municipal/Provincial Board of Education (example)



1.3 National Plans and Strategies for Industrial Manpower/Human Resources Training and Development

Recently, Korea has been continuously facing shortage of skilled industrial workforce and high level engineers and technologists in major industries and industrial research and development institutions even though there have been overall over supply of college graduates, abundant unemployed and untrained senior high school graduates and highly educated women who are extremely underutilized.

The government and industries are also concerned about the quality of the graduates coming out of the various levels of vocational, technical, technological and engineering schools, institutes and colleges in addition to the quantitative shortage of skilled technical manpower supplied by various education and training institutions.

Finally, the Korean government has come to the conclusion that the industrial technical manpower shortage has occurred due to the wrong orientation of the upper secondary education programmes which are heavily biased towards college preparatory courses neglecting the education and training of skilled technical people.

Korean industries have been so far able to cope with the semi-skilled and low skilled industrial manpower as Korea has been dependent on low-tech and mid-tech industries and industrial products. As Korea is aiming at becoming a full fledged developed country with the development of technology intensive industries and products and services during the next decade, Korea needs to train and develop high level skilled technical manpower to prepare for the next stage of socio-economic development challenges.

Korean government has, therefore, been planning to take measures to closely match the national industrial manpower training and development systems and programmes to the quantitative and qualitative manpower development needs and requirement of the future advanced industrial society of Korea by:

a) Expanding the vocational-technical education and training programmes drastically at upper secondary and post-secondary level by 1996 to provide more vocational-technical education and training opportunities for junior high school and senior high school graduates.

b) Expanding science, engineering and technology education programmes at undergraduate and graduate educational institutions.

c) Re-orienting and restructuring senior high school education putting emphasis on vocational-technical education and establishing proper mechanisms whereby the vocational and technical education and training programmes are timely adapted to the rapid changes of industrial technology and process.

d) Developing new technical and engineering education and training systems whereby the industry can also play an active role for the training and development of industry oriented quality manpower or human

resources with the introduction of more flexible technical and engineering education and training systems and programmes.

5. Provision of retraining and continuous education and training opportunities for people working in industry after formal educational programmes through the strengthening of in-company training functions and programmes based on the co-operative collaboration among educational institutions, business and industrial establishments and organizations and research and development institutions.

6. Developing and establishing a comprehensive national manpower development and utilization system which can bring more efficient, effective and systematic co-ordination and management of industrial manpower development and utilization.

Part II

TVET SYSTEMS, PROGRAMMES AND STATISTICS

2.1 Overview of TVET Systems and Programme Structure

The vocational-technical education programmes under the formal education system are provided at upper secondary or high school (grade 10-12) and at post-secondary junior colleges. The high school level vocational-technical education programmes are 3 years and the post-secondary programmes are 2 years except fishery and maritime courses and nursing courses which last 2½ years and 3 years respectively.

There were 679 vocational-technical high schools with a total student enrolment of approximately 707,000 which is about one third of total high school enrolment.

In 1992, there were 128 junior colleges with a total student enrolment of about 350,000 which also constitutes a little bit more than one third of higher education student enrolment in 1992.

Upon successful completion of the high school and junior college, graduates are awarded the High School Diploma and the Junior College Diploma, respectively.

There are also about 6,500 small scale non-formal private vocational-technical institutes providing occupational skill training courses for about 974,000 people throughout the country in 1992. The courses usually last 1-3 months and they are registered with the regional board of education.

The vocational training or semi-formal vocational and technical training programmes which come under the public and private vocational training system administered by the Ministry of Labour usually last 3 to 12 months although there are some programmes that last 2-3 years. These vocational training programmes are provided for both employed and unemployed youths and adults outside the formal education system under the jurisdiction of the Ministry of Labour. As of 1992, there were 80 public vocational training institutes or premises, 296 in-company training centers and 105 authorized private vocational training institutes throughout the country with a training capacity of about 27,000, 94,000 and 35,000, respectively. Of the 80 governmental vocational training institutes, 36 are managed by the Korea Manpower Agency which is a government funded semi-government organization under the umbrella of Ministry of Labour and they provide highly structured quality vocational training programmes for youths and adults who have junior high school and high school education. Most of the vocational training courses and programmes are geared to the acquisition of the National Technical Qualification.

Table 2. Status of TVET (1992)

Administrative Organization	TVET Institutions (Duration of Programme)	Target Population	No. of Schools/ Institutions	Approx Enrolment (capacity)
Ministry of Education and Regional Office of Education	Junior Colleges (2-3 years)	High School graduates	128	345,000 (350,000)
	Vocational-Technical High School (3 years)	Junior High School graduates	679	707,000 (760,000)
	Non-formal Vocational Institutes (1-3 months)	No restrictions	6,500	(974,000)
Ministry of Labour and Korea Manpower Agency	Public Vocational Training Institutes and Centres (6 months - 3 years)	Junior High School and High School graduates	80	29,000 (27,000)
	In-plant Training Centres (3-6 months)		296	50,000 (94,000)
	Authorized Private Vocational Training (3 months - 2 years)	No restrictions	105	25,000 (35,000)

Source: Ministry of Education and Ministry of Labour.

2.2 Technical Vocational Education Programmes and Courses at Upper Secondary Schools or High Schools

The technical high schools or upper secondary vocational-technical high schools offer three years of vocational-technical education programmes in the area of technical, agricultural, fishery and maritime, home economics and business and commerce studies at grade 10-12 level for junior high school graduates. These upper secondary level vocational technical high schools are the major sources of skilled craft level industrial manpower in Korea.

There were 37 agricultural high schools, 126 technical high schools, 227 business and commerce high schools, 9 fishery-maritime high schools, 38 combined vocational high schools and 242 comprehensive high schools which provide vocational courses as well as academic courses. These combined vocational high schools which provide more than two vocational courses and comprehensive high schools are usually located in rural areas or small and medium sized cities and towns where there are a small number of eligible students to provide a variety of vocational-technical occupational training course choices.

In 1992, the total enrolment capacity and actual enrolment of the 679 vocational-technical high schools were 762,710 and 706,298 respectively. The actual enrolment for different vocational areas were: agricultural - 37,728, technical - 220,639, fishery-maritime - 7,889, and business and commerce - 440,042. See Table 3 for details.

There are 53 different courses of students that can be chosen by students at technical high schools, 14 at agricultural high schools, 8 at maritime-fishery and 7 at business and commerce high schools.

There are 53 different courses of students that can be chosen by students at technical high schools, 14 at agricultural high schools, 8 at maritime-fishery and 7 at business and commerce high schools.

The curriculum of vocational-technical high schools is composed of general subjects and vocational subjects. Students need to take between 204 and 216 units during the 3 years of study period or 6 semesters. Of the 204-216 units students need to take, 104-154 units of general subjects and 88-122 units of vocational subjects. Of the 82-122 units allocated for vocational subjects, at least 50% of the units or 41-61 units should be allocated for practical sessions in the case of technical high schools.

Table 3. Enrolment Capacity and Actual Enrolment at Vocational High Schools

		10th Grade		11th Trade		12th Grade		Total			
	No. of schools	Capacity	Enrolment	Capacity	Enrolment	Capacity	Enrolment	Capacity	Enrolment		
									Male	Female	Total
Total Area	737	264,799	247,121	251,169	233,973	246,742	225,204	762,710 (100%)	334,701 (47.4%)	371,597 52.6%)	706,298 (100%)
Agriculture	96	16,314	11,384	17,296	12,423	20,909	13,921	54,519 (7.2 %)	30,916 (81.9%)	6,182 (18.1%)	37,728 (5.3 %)
Technical	198	86,587	84,832	75,204	72,382	68,724	63,425	230,515 (30.2%)	214,366 (97.2%)	6,273 (2.8%)	220,639 (31.2%)
Fishery-Maritime	14	3,447	2,310	3,660	2,725	3,748	2,854	10,855 (1.4%)	7,712 (97.8%)	177 (2.2%)	7,889 (1.1%)
Business & Commerce	429	158,451	148,595	155,009	146,443	153,361	145,004	466,821 (61.2%)	81,707 (18.6%)	358,335 (81.4%)	440,042 (62.3%)

* The actual number of vocational school is only 679. As the comprehensive high schools and vocational high schools that offer more than 2 different vocational courses have been counted as 2 or 3 vocational high schools, the total number of schools showed up as 737.

Source: 1992 Ministry of Education

One unit is one class-hour per week and it lasts for 17 weeks or one semester. There are essential subjects and elective subjects in vocational subjects.

Presently vocational-technical high school students may have one semester of on-the-job training out of six semesters and the on-the-job training is usually taken during the last semester of the 3rd year studies.

Currently, Korean government is planning to introduce a new format of upper secondary technical education system which consists of 2 years of school education and 1 year of structured on-the-job industrial training beginning 1994 and this so called 2 plus 1 system is to be fully introduced by 1998. The purpose of the reformation of the upper secondary school technical education is to enhance the efficiency and effectiveness of technical education based on dual system or school-industry co-operation. It is expected that the new system is to bring qualitative and

quantitative improvement of upper secondary technical education as well as cost optimization in skilled technical manpower training which is rather costly.

The eligibility at vocational-technical high schools by junior high school students is decided by an entrance examination administered by the provincial or municipal office of education at the end of 3rd year junior high school semester. Students' achievement during junior high school is also another important factor to be reckoned in determining the eligibility together with the entrance examination result.

One notable fact is that the vocational technical high school graduates may also seek further education or higher education at junior colleges, colleges and universities like the general or academic high school graduates as long as they are successful in the college entrance examination. Junior colleges may provide some special privileges for the vocational-technical high school graduates in selecting their students as there is an entrance quota of 20-50% reserved for vocational technical high school graduates.

2.3 Technical-Vocational Education Programmes and Courses at Post-Secondary Institutions or Junior Colleges

Junior colleges offer 2-3 years of vocational technical education programmes for upper secondary or high school graduates who have completed 12 years of education through primary, junior high school and senior high school.

There are 223 different courses of studies offered at junior colleges in agricultural, technical, nursing, public health, fishery and maritime, business and commerce, home economics, arts, athletics, social sciences and humanities occupational areas. The nursing courses usually last 3 years and the fishery-maritime courses take 2½ years to finish.

In 1993, there are 128 junior colleges with a total student enrolment of 344,970. The student entrance quota for the junior colleges for 1993 academic year which was set by the Ministry of Education was 174,490 (36%). Whereas the quota for colleges and universities and the quota for open university plus Air and Correspondence University were 224,190 (46.3%) and 85,620 (17.7%) respectively. This shows that the student quota for junior college was more than one third of the higher education student quota in 1993.

As it is seen in Table 1, 120 junior colleges out of the total 128 junior colleges were private, the remaining 8 being national, the post-secondary vocational-technical education in Korea is heavily dependent upon private educational institutions.

It can be noted that the number of junior colleges has been increased to 128 from 118 in 1991 and the student enrolment has also been increased to 344,970 from 277,890 in 1991.

The basic requirement for the entrance to junior college is to pass the standard college and university entrance examination upon graduation from high school. 20-50% of the freshmen quota is reserved for graduates of vocational-technical high schools who intend to major in the same field of study as they did at vocational-technical high schools.

Table 4. Number of Junior College Student by Courses (1992-1993)

Courses	Study year	Enrolment Capacity			
		1st year	2nd year	3rd year	Total
Science	Technical	84,530	74,570	260	159,360
	Agricultural	1,800	3,040	-	4,840
	Fishery-Maritime	720	1,080	720	2,520
	Health	12,780	12,570	4,390	29,690
	Nursing	5,820	5,700	5,700	17,220
	Home Economics	13,560	12,800	-	26,360
	Sub-Total	119,220	109,700	11,070	239,990
Business Related		43,340	38,960	-	82,300
Arts		10,370	9,430	-	19,800
Athletics		1,560	1,320	-	2,880
Total		174,490	159,410	11,070	344,970

Source: Korean Council for Junior College Education

Junior college curriculum is composed of 20-30% of general subjects and 70-80% of vocational subjects. In the operation of the vocational subjects, at least 50% of the sessions must be allocated for practical works. Students need to obtain a minimum of 80 credits (120 for nursing and 100 for fishery-maritime courses) with 24 maximum obtainable credits per semester. Certain courses of studies require 1-3 month of on-the-job training for graduation.

2.4 Vocational Training Programmes

The public vocational training, in-company vocational training and some private organizations' vocational training are under the jurisdiction of the Ministry of Labour and they are operated outside the formal education system for out-of-school employed and unemployed youths and adults.

The public vocational training programmes can be divided into three different categories: the vocational training programmes organized and managed by the Korea Manpower Agency (KOMA), the vocational training programmes which are taken care of by some of the ministries of the government and the vocational training programmes which are run by local governments.

The in-plant or in-company vocational training programmes are conducted by the industrial enterprises that employ more than 150 employees which are obliged either to pay training cost shares or conduct training. As of 1992, there were, 3,417 companies that had this obligation under the vocational training law. Of the 3,417 companies only 286 companies were conducting training and the remaining companies were paying training cost shares or training levy imposed by the government instead of conducting training themselves.

As of 1992, there were 80 public vocational training institutes and centres (36 under KOMA, 37 by government ministries and 7 by local government); 286 in-company vocational training centres and 105 authorized private vocational training institutes.

The total training capacity of the public vocational training institutes at skilled and semi-skilled level training is 26,864 as of 1992, while the training capacity of in-company training centres and authorized private training institutes were 94,204 and 35,876 respectively in 1992. Currently, there are two master craftsmen training colleges under the Korea Manpower Agency which have a training capacity of 700 and 60 each.

Table 5. Status of Vocational Training (1992)

		No. of training establish-ment	No. of trade	Target (1992)	Approved capacity (1992)
Total		481	-	105,415	157,704
Public	Public Total	80	-	30,415	27,624
	KOMA	36	92	19,375	19,375
	Central Government	37	64	6,000	5,099
	Local Government	7	37	5,040	3,150
In-plant		286	117	50,000	94,204
Authorized private		105	64	25,000	35,876

Source: Ministry of Labour

As it is seen in Table 6, the vocational training programmes at the public vocational establishments under the Korea Manpower Agency last six months to three years and they are mostly initial job training programmes at three different levels of training; (1) Assistant or semi-skilled craft certificate level, (2) Grade 2 craft or skilled craft certificate level, (3) higher craft certificate or grade 1 certificate level.

The training programmes of the central government and local government authorities are offered with the training duration of 6 - 12 months and the levels of training are semi-skilled to skilled craft training.

The duration of most of the in-company training programmes are three to six months and the level of training programmes are usually at semi-skilled or assistant craft training standard.

All of the vocational training programmes emphasize the training and development of practical occupational skills with the allocation of 70% of training sessions for practical training.

Table 6. Status of Public Vocational Training Programmes of Korea Manpower Agency (1992) Vocational Training Institutes

		Total	Initial Training	Upgrading Training
Level	Total Duration	19,375	14,010	1,015
Master Craft Level	1 year	760	-	760
Grade - 1 Craft Level	3 years programme	1,440	1,440	-
	2 years programme	4,290	4,290	
	1 year programme	255	-	255
Grade - 2 Craft Level	1 year programme	8,880	8,880	-
Assistant Craft Level	6 months programme	3,750	3,750	-

Table 7. Status of in-Company and Authorized Private Organization Vocational Training (1992)

Total			Initial Training				Upgrading	Retraining	Transfer training
		Sub-total	2 years programme	1 year programme	6 months programme	3 months programme			
In-company	94,204	37,727	60	1,755	16,880	19,032	34,852	21,505	120
Authorized private	35,876	35,726	7,332	6,630	11,184	10,580	-	150	-

Source: Ministry of Labour

Other than the three year public vocational training programme which allows only junior high school graduates, majority of the trainees at vocational training institutes are upper secondary school and lower secondary school graduates although there is no restriction in taking vocational training courses in terms of age, sex, educational qualifications and employment status.

Most of the vocational training courses other than the courses at authorized private vocational training institutes are offered free of charge and in the case of trainees enrolled at in-company training centres and low income family members are paid a training allowance while they are training.

2.5 Non-Formal Vocational-Technical Education and Training Programmes conducted by Private Institutions

As of 1992, there were 6,561 non-formal private institutes registered with the provincial and municipal boards of education throughout the country. The total capacity of the 6,561 private institutes was about 974,000 and these institutions were offering occupational training courses in 24 occupational areas on fee charging basis. The courses offered by these private institutes are in the field of mechanical, metallurgical, electrical, electronics, telecommunications, shipbuilding, aerospace, civil, building construction, textile, mining, information processing, energy, land and housing development, marine, industrial applications, environmental control, broadcasting, nursing, health care, business and commercial services etc.

In view of the importance of the roles and functions of these non-formal private training institutions in national manpower training and development, the Korean government is very much in favour of nurturing the private training institutes by providing various incentive schemes and other supports in the coming years.

2.6 Women in Technical Vocational Education and Training

As of 1990, the economically active female population in Korea was about 7.5 million and this constitutes about 40.5% of the total economically active population which is about 18.5 million.

The number of female students enrolled at vocational-technical high schools throughout the country accounted for approximately 433,000 (53.2%) out of a total number of 812,000 vocational-technical high school or upper secondary (grade 10 - 12) vocational technical schools in 1992..

The statistics from the Ministry of Education show that male students constitute the majority majoring in technical, agricultural and fishery-maritime courses while female students are highly represented in business and commerce courses of studies at business and commerce high school. 80.4% or about 288,500 students at business and commerce high schools were female..

Table 8: Proportion of Vocational High School Enrolment by Sex

Schools/Courses	Total	Male	Female
Agricultural	31,853	35,886	5,789 (18.2 %)
Technical	200,920	188,760	4,942 (2.5%)
Business & Commerce		76,282	288,468 (80.4%)
Fishing & Maritime	7,482	9,164	97 (1.3%)
Vocational	27,024	6,511	14,576 (53.9%)
Comprehensive	186,451	66,851	118,587 (14.6%)
Total	812,482	382,564	432,469 (53.2%)

Source: Ministry of Labour

In the case of vocational training only 17,850 were female trainees out of a total of 93,503 trainees.

Table 9. Proportion of Female Trainees enrolled at Vocational Training Institutes

Types of Vocational Training	Total Trainees	Female Trainees
Public Vocational Training	25,950	2,088 (8.0%)
In-plant Vocational Training	43,304	10,510 (24.3%)
Authorized Vocational Training	24,249	5,255 (21.7%)
Total	93,503	17,850 (19.1 %)

There are two girls' technical high schools and one women's vocational training institute as of 1993 and the number of female students and trainees taking vocational-technical education and training courses is expected to be increased gradually in the coming years. The Korean government is encouraging and promoting women's participation in vocational-technical education and training courses together with increasing women's roles in economic activities.

2.7 National Technical Qualification System

Korea introduced the National Technical Qualification Testing (NTQT) system and scheme in 1967. The aim of the NTQT scheme is to officially test and recognize the occupational technical knowledge and skill standards of individuals and thereby properly guide and direct the training and development of skilled technical manpower required by the business, industries and governmental organizations and at the same time to improve and enhance the socio-economic status of skilled technical people.

There are three major qualification categories or divisions in the NTQT system: Engineering Division, Skilled Craft Division and Service or Business and Commerce Division.

Within the engineering division there are three different levels of qualifications namely Engineer Grade 2, Engineer Grade 1 and Professional Engineer. In the case of craft division, there are four different levels of qualifications: assistant grade, skilled craft grade 2, skilled craft grade 1 and Master Craft grade. In the service sector division there are three levels of qualifications; Grade 3, Grade 2 and Grade 1.

The eligibility for each level of qualification tests for respective division is shown in Figure 4.

The qualification test for the professional engineer grade consists of written and interview tests, and the test for other levels of qualification in Engineering Division and Craft Division are written tests plus practical tests except the assistant craft grade which only requires a practical test. In the case of Service Division, bookkeeping, typing, stenography and calculation have written tests, while word processing and secretarial works are tested by both a written and a practical test.

The qualification tests for Engineering and Skilled Craft Divisions are organized and administered by the Korea Manpower Agency (KOMA) and the tests for Service Division are organized and administered by the Korean Chamber of Commerce and Industry.

The National Technical Qualification System Review and Assessment Committee and the 25 professional sub-committees under the Review and Assessment Committee within the Ministry of Labour decide important issues and matters concerning the National Technical Qualification Testing Systems and its implementation.

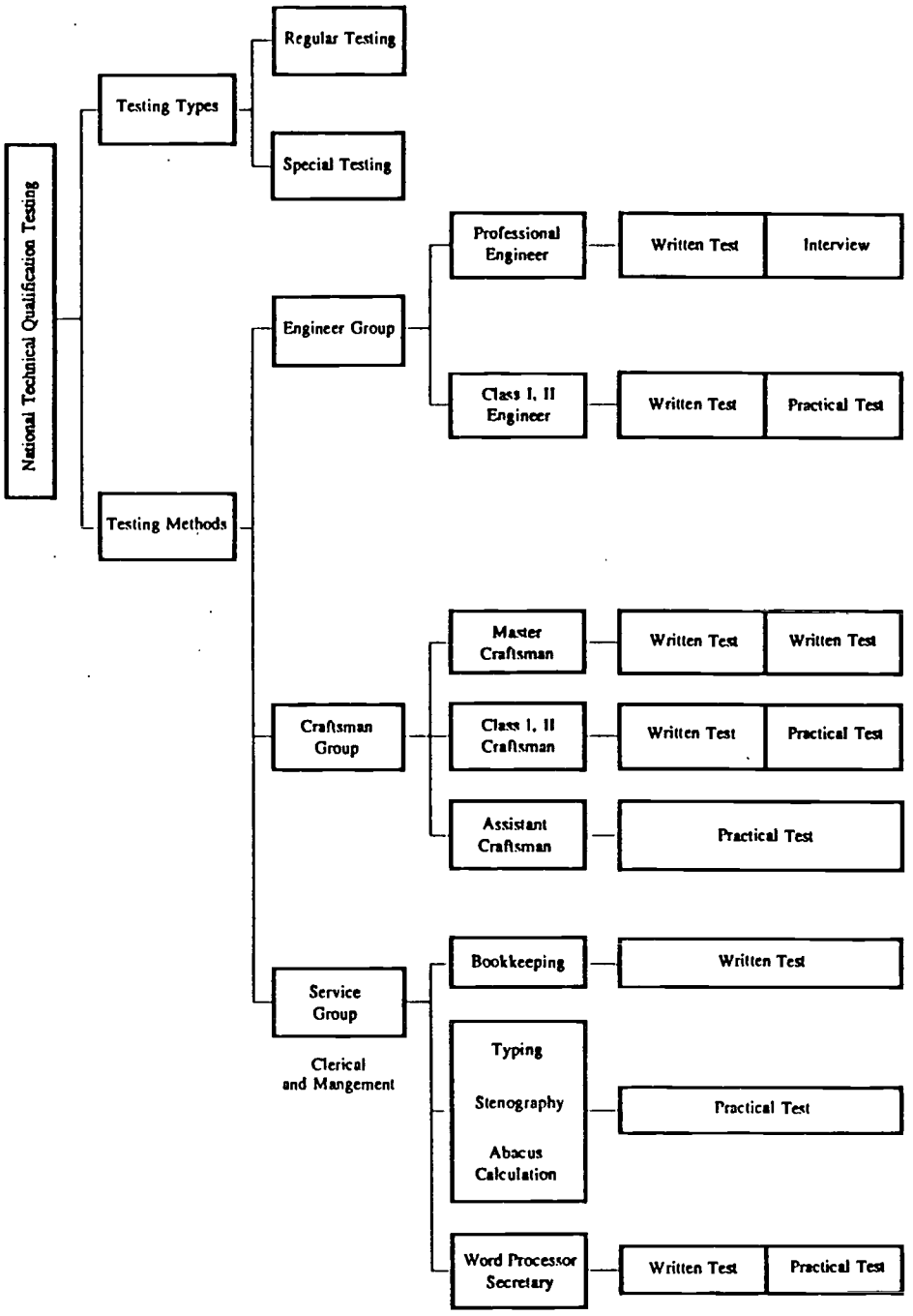
In 1991 there were a total of 317,147 candidates for engineering division tests and only 38,158 (12%) succeeded in passing the test. In the skilled craft division 204,170 (21%) candidates passed the tests out of 984,083 candidates. In the case of service division 703,412 (29%) candidates were successful out of 2,375,521 candidates.

As of December 1992, there were a total of 612,622 qualified engineers who have passed the engineering division test, 2,594,723 qualified skilled crafts and 9,271,824 qualified services personnel throughout the country.

Figure 4. Divisional Qualification Level and Eligibility of the National Technical Qualification Testing System

Division	Level	No. of Testing Occupations	Eligibility
Engineer	Professional Engineer	96	• Engineer Grade 1 + 7 years of work experience (WE) • Engineering Grade - 2 + 9 years of WE • College Degree + 9 years of WE • Junior College + 11 years of WE • 20 years of WE
	Grade 1	89	• Engineer Grade 2 + 2 years of WE • College Degree • Junior College Diploma + 2 years of WE • 10 years of WE
	Grade 2	84	• Junior College Diploma • Skilled Craft Grade - 1 • Skilled Craft Grade - 2 • High School Diploma + 4 years of WE • 7 years of WE
Skilled Craft	Master Craft	34	• Master's College + 6 years of WE • Skilled Craft Grade - 1 + 11 years of WE • 16 years of WE
	Skilled Craft Grade 1	59	• Skilled Craft Grade 2 + 3 years WE • Junior College Diploma • High School Diploma + 4 years of WE • 7 years of WE
	Skilled Craft Grade 2	205	open
	Assistant Skilled Craft	115	open
	Service Sector	Grade 1 Grade 2 Grade 3	open

Figure 5. Method of Technical Qualification Testing



Part III

TVET SUPPORTING SYSTEMS AND ACTIVITIES

3.1 TVET Administrative Systems

1. **Administration of Upper Secondary Vocational-Technical Education**

   The Vocational Education Division under the Science and Technology Education Bureau of the Ministry of Education is the central government level office dealing with upper secondary vocational-technical education. The head of the Science and Technology Education Bureau is the Director General and the Vocational Education Division is headed by a Director.

   At Municipal or Provincial Board of Education level, the Director of Secondary Education Bureau is in-charge of the upper secondary level vocational-technical education. The science and technology education section, under the Bureau of Secondary Education, is the administrative office taking care of matters related to vocational-technical education and it is headed by a section chief or a deputy director.

   At individual upper secondary or vocational and technical high school there is a school principal assisted by vice principal(s) to take care of academic and administrative managerial affairs of each school. Each department of vocational-technical high schools is headed by a head of department or head teacher to oversee and coordinate teaching and related activities of the department.

2. **Administration of Junior Colleges or Post-Secondary Vocational-Technical Education**

   Junior colleges are directly administered by the Ministry of Education. The Junior College Administrative Affairs Division and Academic Affairs Division under the Science and Technology Education Bureau are looking after the administrative and academic related matters for junior colleges and the divisions are headed by divisional directors.

   At Junior College level, individual junior college is represented by a college dean. Private junior colleges, which constitute more than 90% of junior colleges, are usually run by private school foundations. Each school foundation has a board of trustees chaired by a Chairman or President of the Board of Trustees.

In 1979, Junior Colleges as they are run mostly by private school foundations established the Korean Council for Junior College Education (KCJCE) to enhance the autonomy and solidarity of junior colleges, and to promote healthy development of junior colleges through inter-institutional co-operation in management and research and by making policy recommendations to the government collectively.

3. **Administration of Vocational Training**

The vocational training is administered by the Ministry of Labour. The office in-charge of vocational training in the Ministry of Labour is the Vocational Training Bureau under which there are three (3) divisions; Vocational Training Planning Division, Vocational Training Guidance Division and Vocational Qualification Promotion Division. The Vocational Training Bureau is headed by a Director General and the three divisions are headed by Divisional Directors.

The vocational training planning division takes care of matters related to:

- Development and adjustment of vocational training policies
- Matters related to training standards
- Training curricula and text books, publishing and supply
- Training and licensing of instructors
- Deciding regulations on in-company training
- Management of vocational training promotion fund
- International co-operation
- Supervision of the Korea Institute of Technology and Education
- Operation of Vocational Training Review and Assessment Committee.

The Vocational Training Guidance Division looks after matters related to:

- Authorization and supervision of private vocational training bodies
- Guiding and supervising the Korea Manpower Agency
- Approval of guidance and supervision of vocational training plans and programmes
- Installation and supervision of vocational training facilities, machines and equipment
- Assisting and supporting various vocational training related activities
- Management of trainees
- Management of funds for vocational training facilities
- Management of vocational training officers.

The Qualification Promotion Division takes care of matters related to:

- Development of policies regarding National Technical Qualification System

- Co-ordination of Technical Qualification Testing Plans
- Co-ordination and supervision of technical qualification testing agencies and institutions
- Operation of the National Technical Qualification System Review Committee
- Development of basic policies on technical skills training and development
- Skills training and development promotional activities including skill competitions
- Guidance and supervision of entrusted skill training and development agencies, bodies, institutions and organizations
- Skill training and development fund raising and its management.

The operation and management of the 36 public vocational training institutes under the purview of the Ministry of Labour is entrusted to the Korea Manpower Agency (KOMA) which was established in 1982.

The Korea Manpower Agency is also looking after the Technical Qualification Testing and the management of qualified technical personnel.

The in-company vocational training programmes, which are conducted by the industries which employ more than 150 employees and the vocational training programmes conducted by authorized private vocational training organizations are administered, guided and monitored by the 45 local labour offices under the Ministry of Labour.

At individual vocational training institute level, there are usually four (4) divisions, assisting the director and training manager; training division, trainee guidance division, skill development division and general affairs division. The skill development division is taking care of co-operation and collaboration affairs with business and industries.

3.2 TVET Research and Development Activities

1. The research and development works and projects for the upper secondary level vocational-technical education are carried out mainly by the Korea Educational Development Institute (KEDI). KEDI is an independent autonomous and government funded juridical foundation for educational research and development.

   KEDI carries out the following educational research and development works in all areas of education including vocational-technical education at upper secondary schools:

   - Comprehensive and systematic research and development activities on educational goals, contents and methodologies;

- Development of curricula and textbooks;
- Production of instructional materials;
- Prescription of policy measures in the context of long-term educational development and planning and,
- Dissemination of research findings and hosting of forums to provide exposure to research findings.

The Division of Vocational-Technical Education of KEDI is taking care of the research and development works and projects related to vocational-technical education.

2. The development and publication of curricula and textbooks for the vocational and technical high schools are coordinated by the Academic Affairs Supervision cum Textbook Compilation office of the Ministry of Education.

3. The Industrial Education Research Centre affiliated to the College of Engineering of the Choongnam National University also carries out individual and joint research works on secondary level industrial and technical education, conducts seminars, and workshops and issues publications related to industrial and technical education.

4. As for the national level research and development activities for the junior college or post-secondary level vocational-technical education, it is carried out by the Korean Council for Junior College Education. The KCJCE is a non-governmental organization which is run by a board of trustees whereby all the 128 Junior College deans are the Council Member. The major functions and activities of KCJCE are research and development works on junior college education.

The functions of KCJCE are as follows:

- Research, consultation and exchange of information on junior college education system
- Research on the junior college admission system
- Consultation on and co-ordination of policies designed to obtain financial aid to junior colleges and to fix tuition fees
- Evaluation of management of junior colleges
- Research, development and dissemination of junior college curricula and teaching methods
- Research on school-industry co-operation and its promotion
- Co-ordination of development, publication, and dissemination of textbooks and teaching materials
- Training of teaching staff at home and abroad
- Exchange and co-operation with foreign higher education institutes

- Inter-junior college co-operation in common use of facilities
- Implementation of matters entrusted by the Minister of Education
- Other matters related to junior college education

5. The research works and projects on vocational and industrial training are undertaken mainly by the Industrial and Technical Manpower Research Centre affiliated to the Korea Institute of Technology and Education, a newly-established vocational technical teacher and instructor training institute.

6. The training standards or vocational training specification and teaching-learning instructional materials including textbooks and training manuals are developed by the Training Standards and Instructional Materials Development Division of the Korea Manpower Agency.

3.3 TVET Teacher and Instructor Training

1. Vocational-technical teachers for upper secondary vocational-technical high schools are trained mainly at vocational-technical teacher training department of various colleges and universities.

2. The teachers in the area of technical education are trained at the Department of Industrial Education of College of Engineering at Choongnam National University. The annual enrolment capacity or entrance capacity of the department is 70 students in seven different technological fields such as electronics, electrical, mechanical, building construction, civil, metallurgical and industrial chemical engineering. The teachers for computer technology are trained at the Korea National University of Education with annual training capacity of 20.

   Students in the technical and industrial education department need to take various vocational-technical education and teaching related pedagogical subjects and practise student teaching in addition to taking their own specialized technical and engineering subjects and general subjects. Upon successful completion of the course, students are awarded the Bachelor of Science degree and a secondary school teacher license.

3. The teachers in the area of agricultural education are trained at three universities, Seoul National University, Soonchon National University and Kunkook University and the annual total entrance quota of the three Agricultural Teacher Training Departments of the three universities is 80.

4. The teachers in the area of fishery and maritime are trained at the Maritime-fishery Education Department of Pusan Maritime-Fishery University. The annual training capacity of the department is 10.

5. The teachers of business and commerce studies are trained at 15 different colleges and universities throughout the country.

6. Other than these vocational-technical teacher training institutions, many other colleges and universities offer teacher education programmes in addition to the students' major subjects to supplement the supply of teachers for secondary schools. This arrangement provides an alternative path of becoming teachers of their major specialization for students enrolled in programmes or department other than teacher training departments or colleges.

7. The in-service training for upper secondary vocational-technical teachers is conducted by the four secondary schools. This arrangement provides an alternative path to becoming a teacher in their major specialization for students enrolled in programmes or department other than teacher training departments or colleges.

   The newly established Korea Institute of Technology and Education (KITE) is to train technical teachers and instructors for vocational and industrial training institutes and technical high schools. The current annual training capacity of 240 of the KITE is to be expanded to 480 by 1998 and it will also provide upgrading and retraining programmes for existing technical-industrial teachers and instructors.

3.4 TVET and Industry Co-operation

The co-operation and collaboration between vocational-technical schools and industry has been rather weak and loose. The industries have been providing unorganized and unstructured on-the-job work experience for the vocational-technical high school students and junior college students on a voluntary basis upon request by individual high schools and junior colleges.

Presently, the Korean government is in the process of restructuring the vocational-technical education and training system to develop and implement a TVET system based on close co-operation and collaboration between TVET and industries especially in the area of technical education and training. The new high school technical education system is to be introduced beginning 1994 and it is expected to be in full operation by 1998. The main purpose of the restructuring is to improve the efficiency and effectiveness of TVET by sharing the resources available in schools and industry.

Part IV

DIRECTORY OF KEY TVET RELATED OFFICES ORGANIZATIONS AND PROFESSIONALS

4.1 National Level TVET Administrative Offices

1. Vocational Education Division
   Science and Technology Education Bureau
   Ministry of Education
   Sejong-Ro Chongro-Ku Seoul
   Fax No.: (2) 736-3402; (2) 739-6028
   Tel. No.: (2) 720-3334; (2) 736-4137

2. Junior College Education Division
   Science and Technology Education Bureau
   Ministry of Education
   Sejong-Ro Chongro-Ku Seoul
   Fax No.: (2) 720-3402; (2) 739-6028
   Tel. No.: (2) 720-3331; (2) 720-3335

3. Vocational Training Bureau
   Ministry of Labour
   Grachon, Kyunggi-do
   Fax No. (2) 503-9771, 9772
   Tel. No. (2) 503-9754, 9755

4. Korea Manpower Agency
   370-4 Kongduk-dong Mapo-ku, Seoul
   Fax No. (2) 715-3211
   Tel No. (2) 715-3212

5. Korean Chamber of Commerce and Industry
   Namdaemoon-ro, Choong-Ku, Seoul 100-743
   Fax No. (2) 771-3267
   Tel. No. (2) 316-3570, 3525

4.2 TVET R&D Related Institutes and Organizations

1. Vocational Technical Education Division
   Korean Educational Development Institute
   92-G Umyeon Dong Suhchoo-Ku, Seoul, 137-781
   Republic of Korea
   Fax No. (2) 578-4482
   Tel. No. (2) 572-5121

2. Industrial Technology and Manpower Research Center
   Korea Institute of Technology Education
   Gajeon-Ri Byungchon-Myon
   Chonan-Kun, Chungnam 330-860
   Republic of Korea
   Fax No. (417) 64-3261
   Tel. No. (417) 60-1000

3. Industrial Education Research Center
   College of Engineering
   Chungnam National University
   Daejon 305-764
   Republic of Korea
   Fax No.: (42) 823-2931
   Tel. No.: (42) 821-6001

4. Korean Council for Junior College Education
   804 Sunmyonghoi-Building Yoido
   Seoul 150-010
   Republic of Korea
   Fax No. (2) 780-4287
   Tel. No. (2) 784-5542; 782-5780

5. Central Educational Research & Training Institute
   25-1 Samchong-dong Jongno-Ku, Seoul
   Fax No. (2) 397-0815
   Tel. No. (2) 733-0149

6. Korean Women's Development Institute
   1-363 Bulkwang-dong Eunpyung-Ku, Seoul 122-040
   Fax No. (2) 3560070
   Tel. No. (2) 356-1467

4.3 Teacher & Instructor Training Institutions

1. Department of Technical and Industrial Education
   College of Engineering
   Chungnam National University
   Daejon 305-764
   Republic of Korea
   Fax No. (42) 823-5436
   Tel. No. (42) 821-5694

2. Korea Institute of Technology Education
   Byungchum-Myon Chunan-Kun
   Chungnam 333-860
   Republic of Korea
   Fax No. (417)64-3261
   Tel. No. (417)60-1000

3. Department of Agricultural and Rural Adult Education
   College of Agriculture and Life Sciences
   Seoul National University
   Suwon 441-744
   Republic of Korea
   Fax No. (331) 291-5830
   Tel. No. (331) 290-2541

4. Teachers' Affairs Bureau
   Ministry of Education
   Sejongro Chongro-ku, Seoul
   Fax No. (2) 397-0815
   Tel. No. (2) 720-3442

4.4 TVET Related Professional Societies, Assocations and Organizations

1. Korean Institute of Industrial Educators
   College of Engineering
   Chungnam National University
   Taejon, Chungnam 305-764
   Fax No. (42) 823-5436
   Tel. No. (42) 823-5691

2. The Society of Korean Agricultural Education
   College of Agricultural & Life Sciences
   Seoul National University
   Suwon, Kyunggi-do 441-744
   Fax No. (331) 291-5830
   Tel. No. (331) 290-2525

3. The Korean Society for the Study of Vocational Education
   College of Engineering
   Chungnam National University
   Taejon, Chungnam 305 - 764
   Fax No. (42) 823-5436
   Tel. No. (42) 821-5681

4.5 Offices and Agencies for TVET International Co-operation

1. Technology Co-operation Bureau
   Ministry of Science and Technology
   Gwachon, Kyunggi-do
   Republic of Korea
   Fax No. (2) 503-7673
   Tel. No. (2) 503-7666, 7667

2. International Education & Co-operation Agency
   Non-Formal & International Education Bureau
   Ministry of Education
   Sejong-Ro Chonro-Ku, Seoul
   Republic of Korea
   Fax No. (2) 503-7673

3. Vocational Training Bureau
   Ministry of Labour
   Gwachon, Kyunggi-do
   Republic of Korea
   Fax No. (2) 503-9771, 9772
   Tel. No. (2) 503-9754, 9755

4. Korea International Co-operation Agency
   Yunkun - Dong Chingro-ku, Seoul
   Republic of Korea
   Fax No. (2) 744-1092
   Tel. No. (2) 740-5114

5. International Co-operation Division
   Korea Manpower Agency
   Kongduk-Dong Mapo-Ku, Seoul
   Republic of Korea
   Fax No. (2) 715-3211
   Tel. No. (2) 715-3212, 3213

6. Korean Council for Junior College Education
   Summyonghoi Building Yoido
   Republic of Korea
   Fax No. (2) 780-4287
   Tel. No. (2) 780-5542; 782-5780

Part V

PRESENT SITUATIONS AND FUTURE CHALLENGES OF THE KOREAN TVET

Although there have been some social, psychological, financial, structural and functional constraints and limitations, it is considered that Korean TVET systems and programmes have so far well served their purposes in the national socio-economic development for the last 25 years. Now is the time for the Korean TVET to adjust and strengthen its efficiency and effectiveness further in order to serve the people, industry and society better by expanding TVET opportunities and by upgrading the quality of courses and programmes meeting all the challenges coming from ever changing national and international socio-economic and technological environment.

Recently, Korean government has reached a conclusion that the present secondary education is too heavily biased college entrance preparatory programme neglecting the aspects of socio-economic needs and requirements of the coming new technological industrial society. The wrong orientation of the upper secondary education has been producing too many unemployed graduates as well as occupationally unprepared, untrained and unemployable high school graduates, causing acute shortage of skilled industrial workforce. In addition to the quantitative shortage of skilled industrial manpower in every sector of industry, the qualitative problems of the upper secondary and post-secondary TVET programmes which ultimately produce poor quality TVET graduates, which is being caused due to weak field-work oriented TVET, inadequate and outdated training facilities and lack of competent teachers and instructors who have good industrial exposure, is another concern of the government.

The Korean government, has therefore, decided to make structural and functional adjustment in the vocational-technical education and training systems and programs in order to make them more flexible and adaptable to the rapidly changing socio-economic and technological situations and environment, in order to prepare for the coming technology intensive industrial society. The government is in the process of restructuring the TVET systems and programmes by introducing 2 + 1, two years in school and one year in industry, or dual system at upper secondary level of TVET and by creating more further education or continuing education opportunities for TVET graduates working in industry with the active participation and role of industries in TVET planning and implementation and with the expansion of TVET courses and programmes to attract and accommodate more students at TVET schools and institutes at upper secondary and post-secondary level.

In view of the present TVET situations, the future challenges cum strategies of invigorating the Korean TVET may be summarized as follows:

1. Development and implementation of more systematic and effective career guidance and counselling programmes and services at primary, lower secondary and upper secondary schools to channel as many students to vocational - technical schools and institutes as possible.
2. Creating and maintaining socio-economic and psychological environment and conditions conducive to attract more junior high school and high school graduates into vocational-technical education and training programmes at secondary and post-secondary level.
3. Tapping and utilizing the enormous capital, technological and human resources that are available in industry for TVET through the development and establishment of close school-industry collaborative systems and mechanisms.
4. The integration of TVET systems and National Technical Qualification Testing Systems to meet the real need of the industrial workers and occupational performance standards.
5. Strengthening and upgrading the post-secondary level private vocational-technical training institutes and their programmes to attract and accommodate more upper secondary school graduates.
6. Development and implementation of TVET teacher and instructor training systems and programmes which can train, develop and maintain TVET teachers with high quality of practical industrial technology skills and knowledge as well as teaching competencies.
7. Further upgrading of the managerial qualities and competencies of the TVET administrators and management personnel to meet the new human, organizational, industrial and social development challenges and requirements
8. Development and utilization of TVET professionals and experts, and establishment of a National Centre for Vocational-Technical Education and Training (NCVTET) to take care of all aspects of TVET research, development and training functions and activities.

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