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ABSTRACT

This technical and vocational education (TVE) profile on Bangladesh is one in a series of profiles of UNESCO member countries. It is intended to be a handy reference on TVE systems, staff development, technical cooperation, and information networking. An overview of the report appears first. Part I provides general information on the physical geography, demography, and religion; socioeconomic background; and literacy and education. Part II describes the educational structure, secondary education, and development plans. Part III deals specifically with the technical education system. It describes formal technical education and its historical development. Part IV describes major TVE organizations, such as the Directorate of Technical Education (DTE), Bangladesh Technical Education Board, National Council for Skill Development and Training (NCSDT) and Bureau of Manpower, Employment, and Training (BMET). It also covers noninstitutional training and teacher training. Part V addresses the issues of the employment situation of institutionally trained workers and the inadequacy of training programs and lists recommendations by the Director-General of Technical Education and the International Labour Office. Appendixes include the following: a chart of institutes under the DTE; tables of numbers of graduates from 1958-78; a chart of institutes under the BMET; and 11-item bibliography. (YLB)

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

## Bangladesh

UNEVOC
International Project on Technical and Vocational Education

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

## Bangladesh

Asia-Pacific Centre of Educational Innovation for Development
ACEID
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International Project on Technical and Vocational Education
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cpstc
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This volume is one of a series of member country profiles on Technical and Vocational Education of the following member countries:

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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 Bangladesh was prepared by Prof. MMR Siddiqi, Seconded Faculty Member to CPSC from Bangladesh.

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Director, UNESCO PROAP

# OVERVIEW

Bangladesh emerged as an independent nation in December 1971. It comprises an area of 55,000 square miles (144,499 square kilometers) with a population of 112 million. It is one of the most densely populated countries with 2,014 persons per square mile. The annual population growth was 2.17 per cent during 1981-91. Bangladesh is a relatively flat country lying in the deltaic plain of Ganges-Brahmaputra-Megna river system. The four major religions are Islam, Hinduism, Bhuddism and Christianity. The Muslims constitute about 87 per cent of the population. The constitution of the country guarantees full freedom of religious and cultural activities to all communities. About 90 per cent of the people live in some 68,000 villages.

One of the least developed countries of South Asia, Bangladesh ranks 147 among the 173 countries for which the Human Development Index (HDI) has been derived (UNDP, 1993). Bangladesh is greatly dependent on foreign aid for its economic development. Of the fourth plan public sector allocation of TK 419,300 million, 73.89 per cent is to come as external resources. About 37 per cent of the GDP originates from agriculture (at current prices) and per capita GNP in 1991 was around $220. Life expectancy at birth is 51.8 years and the proportions of population with access to health services and sanitation are 45 per cent and 10 per cent, respectively. The daily calorie supply stands at 83 per cent of the requirement. About 57 per cent of the rural families are functionally landless and their number is growing.

Despite the dilemmas confronting the country, Bangladesh has established a unique national identity. Its society in general is not differentiated by castes or tribes but mainly by differences in wealth and education. Such differences are more amenable to reduction through policy intervention. Although numerous, the poor and the disadvantaged groups in Bangladesh have displayed a remarkable resilience to survive against most adverse circumstances including repeated and severe natural calamities. When properly organized and supported, these groups show a very high degree of efficiency not only in resource use but also in savings, investment as well as technology adaptation and entrepreneurship. Women in Bangladesh are poised to play a more significant role in the development process if they can be brought to the mainstream of it.

The educational pyramid of Bangladesh consists mainly of the following levels: (a) pre-primary, (b) primary, (c) secondary, (d) higher secondary or intermediate, (e) first degree and (f) master's degree. Subsequent to one or two years of pre-primary education (available mostly in cities and some of the district headquarters), the primary level extends over a five year period (grades 1-5) and caters for children of age group of 6-11. The secondary level consists of grades 6-10

(generally divided into two sub-levels viz. "junior secondary" consisting of grades 6-8 and "secondary" consisting of grades 9 and 10). At the end of grade 8, there is a junior scholarship examination taken by about 10per cent of the children of grade 8, and at the end of grade 10 is the first public examination known as the Secondary School Certificate (SSC) Examination, which must be passed by all candidates seeking to move to the two-year higher secondary level (grades 11-12). At the end of grade 12 there is a further public examination leading to the Higher Secondary Certificate (HSC), which is a requirement for admission to first degree courses and appointment to secretarial positions in government services. While the bachelor's degree requires two years for pass and three years for honours courses, the master's degree extends over two years in the case of pass graduates and one year for honours graduates.

Education has been given the highest allocation in the revenue budget of 1992-93 (about 18.62 per cent) and its share in the annual development programme is about 9.11 per cent. Public expenditure on education increased from 1.5 per cent of GNP in 1980 to 2.2 per cent of GNP in 1989. Primary education is free and on its way to being made compulsory. The literacy rate in Bangladesh is around 25 per cent only. Although adult literacy rate has increased in recent years, in absolute figure, the number of illiterate adults increased from 32,923,083 in 1981 to 41,961,300 in 1990. Completion rates in Bangladesh are generally low at all levels, but especially in primary education. According to one source, in the mid 1980s, the proportions of grade I entrants surviving to grades 5, 8, 10 and 12 were 24 per cent, 17.8 per cent, 10.7 per cent and 4.2 per cent respectively.

The formal technical education in Bangladesh is offered in three tiers, with degree level engineering courses at the top, diploma level technician courses at the middle and the certificate level craft courses at the bottom. Degree level engineering courses (grades XIII-XVI) are offered at the Bangladesh University of Engineering and Technology (BUET) located at Dhaka, and four Bangladesh Institutes of Technology (BITs) located at Dhaka, Chittagong, Rajshahi and Khulna. The middle level courses (grades XI-XIII) are offered in 20 Polytechnic Institutes, 3 Monotechnic Institutes located mostly at district headquarters. Certificate craft courses are offered in 51 Vocational Training Institutes and 12 Technical Training Centres (TTCs) including the Institute of Marine Technology. The VTIs are under the administrative control of Directorate of Technical Education (DTE) and the TTCs are under the Bureau of Manpower, Employment and Training (BMET).

The establishment of the Directorate of Technical Education in 1960 under the Ministry of Education (MOE) was a milestone in the historical development of formal TVE system and the country witnessed a phenomenal expansion during the sixties. Most of the institutional bases in the areas of engineering, technician and vocational education were created during the sixties.

The Technical Education Act of 1967 (Act 1 of 1967) creating the East Pakistan (now Bangladesh) Technical Education Board under the MOE was another landmark in the history of TVET in Bangladesh. BTEB is a statutory body having

the primary responsibility of curriculum development, conducting of examinations and awarding certificates of performance. Although created under the MOE, the BTEB exercises academic control over different institutions falling under different Ministries.

The diploma in Engineering courses (technician level) offered in 20 Polytechnic Institutes is of 3 years duration after Secondary School Certificate (SSC). The technology courses offered are Civil, Electrical, Mechanical, Power, Electronics, Chemical, Food, Automobile, Industrial Wood and Architecture. The 3 Montotechnic Institutes offer diploma courses in Printing, Ceramics and Survey. The Polytechnic and Montotechnic Institutes are under the administrative control of the Directorate of Technical Education (DTE) while the academic control is exercised by the Bangladesh Technical Education Board (BTEB). The diploma courses in Agriculture (3 years duration after SSC), Forestry (2 years duration after Higher Secondary School Certificate), Commerce (2 years duration after SSC) belong to other Directorates, but academic control lies with BTEB. The total annual enrolment capacity in diploma programmes is about 4,630. The sub-technician courses are Survey Final, Aminship, Secretarial Science, Training in Business Typing, Textile and the total annual enrolment capacity is about 1420.

The vocational/trade level courses are offered in 51 Vocational Training Institutes (VTIs) under the Directorate of Technical Education and 12 Technical Training Centres (TTCs) including the Institute of Marine Technology under the Bureau of Manpower, Employment and Training (BMET) under the Ministry of Labour and Manpower. The VTIs and TTCs are , however, under the academic control of BTEB. The trade courses offered in VTIs and TTCs are Automotive, Electrical, Welding, Carpentry, General Mechanics, Drafting (Civil), Drafting (Mech), Farm Machinery, Foundry, Machinist, Civil Construction (Masonry), Plumbing and Pipe Fitting, Radio and TV, and Refrigeration and Air Conditioning. The total annual enrolment capacity is about 5325.

In addition to the above formal training, a variety of non-institutional training programmes are conducted by the government departments, semi-government agencies, non governmental organizations (NGOs) and private enterprises. The Association of Development Agencies of Bangladesh (ADAB) co-ordinates the works of international, national and local NGOs, and the Association of Private Non-Profit Trade Schools (APNTS) promotes the activities of private trade schools (many owned by the NGOs). Up to date statistics are not generally available. It may be said that the number of programmes may exceed 1000 and over 100 NGOs are active in the field. About 30 NGOs are conducting school-based training in trades like electrical wiring, mechanic, carpentry, lathe operation, and welding. Important organizations engaged in non formal training are the Bangladesh Industrial Technical Assistance Centre, the Mirpur Agricultural Workshop and Training School (MAWTS), the St Joseph School for Industrial Trades and the Underprivileged Children's Education Programme (UCEP). Many government and semi-government departments, NGOs and private organizations also conduct non-formal training

programmes. Upgrading training of employed workforce is also available in many government, and semi-government organizations and large industries. In addition, there is apprentice training which is not properly implemented.

The major problems and issues in the area of skill development that need to be addressed are: (a) lack of co-ordination between institutions in the public and private sectors, (b) under-utilization of the existing facilities, (c) high drop out rates of VTIs and TTCs, (d) lack of linkage between training institutions and labour market, (e) low female participation, and (f) unemployment.

In respect of teacher training, the Technical Teachers Training College (TTTC), established in 1964, offers one year Diploma in Technical Education and two year BSc in Technical Education. In addition, TTTC runs many short courses. The location of TTTC over the ground floor of Institute of Glass and Ceramics is a great handicap for further expansion of both the institutions. The decision of Ministry of Education to give the ground floor to TTTC is yet to be implemented. TTTC, being an apex institution, has a great role to play in staff development for all categories of teachers and administrators of the entire TVE system. In course of time, TTTC will have to play a greater role by offering post graduate courses and acting as an intellectual arm of the Ministry of Education in the area of TVE. To train the teachers of VTIs, Vocational Teachers Training College (VTTI) was established in 1982 at Bogra. The Institute offers one year certificate courses. Attempts are being made to introduce Diploma in Vocational Education. VTTI also offers short refresher courses to teachers and management courses to the administrators. Both TTTC and VTTI are well equipped and well staffed institutions. A proper linkage among TTTC, VTTI and BTEB may be established for providing leadership in the training of skilled manpower needed by the country.

The issues and problems relating particularly to vocational education have been addressed and recommendations made in many seminars and symposia, and also by many organizations like ILO. These have been briefly stated in Chapter V. The Annexes I, II and III give names of the various TVE institutes and statistics on the subject.

Part I

# GENERAL INFORMATION

## 1.1. Physical Geography, Demography and Religion

"Bangladesh is a magical tapestry weaved with the threads of hope, struggle and love. The long meandering rivers and water ways are like motions of a life, vibrant and alive, taking and retruning loving and being loved. The land is the frame which holds the tapestry together and the people are the colours which make it so enchanting." (Government of Bangladesh 1987; *Meet Bangladesh* page 26). Against this official picture of Bangladesh viewed with literary expression, Bangladesh reflects ' a composite picture of all the extremes of poverty and under development on one hand, and is a land of unexplored potentialities and untapped resources - both human and physical' on the other. (Rahman, 1991)

Bangladesh comprises on area of 55,598 square miles (144,499 square kilometers) with a population of 112 millions. It is one of the most densely populated countries with 2,014 persons per square mile with annual population growth of 2.17 per cent during 1981-91.

A sub-sector study by the Government of Bangladesh and the UNDP on "Secondary Education in Bangladesh" in December, 1992 is an excellent document portraying the state of art of secondary education including technical and vocational education. The following paragraphs which provide socio-economic background of Bangladesh are taken from the document with some updating.

The urban population increased from 8.78 per cent in 1974 to 15.18 per cent in 1981. With an average annual growth rate projected to be 1.8 per cent during 1989 - 2000, the population is estimated to increase to 128 million by the year 2000 and 176 million by 2025. According to one estimate, the dependency ratio of 48 per cent in 1985 is expected to drop to 42 per cent by the year 2000, but will remain above the Asian average, as at present (the Asian averages for the corresponding years being 43 per cent and 36 per cent respectively). The annual growth rate of the labour force has been projected at 3.4 per cent during the Fourth Five-Year Plan (1990-95). This would be mostly contributed by an increasing female participation in the labour force. In 1989, female labour and child labour (5-14 years) accounted for 41.22 per cent and 12.03 per cent respectively of the total civilian labour force. Table 1.1 gives age structure of the population and Table 1.2 shows breakdown of the civilian labour force.

Across the Tropic of Cancer Bangladesh extends between 20° 34' and 26° 38' North Latitudes, and between 88° 01' and 92° 41' East Longitudes. It is almost surrounded by Indian territory except for a small strip of frontier with Burma on the

southeast and the southern border fronting the Bay of Bengal. Bangladesh is a relatively flat country lying in the deltaic plain of Ganges - Brahmaputra - Megna river system. The only significant uplands occur in the north-east and south-east of the country with average elevations of 244 m and 610 m respectively. The country is covered with a network of numerous rivers and canals forming a maze of interconnecting channels

Table 1.1 Age Structure of the Bangladesh Population ( per cent)

| Year | 0-14 Years | 15-64 Years | Above 64 |
|---|---|---|---|
| 1990 | 42.9 | 54.0 | 3.1 |
| 2025 | 25.7 | 68.9 | 5.4 |

Source: World Bank, *World Development Report* 1992

Table 1.2 Civilian Labour Force in 1989 (millions)

| Sex | Urban | Rural | Total |
|---|---|---|---|
| Male | 4.3 | 25.5 | 29.8 |
| Female | 1.4 | 19.5 | 20.9 |
| Both Sexes | 5.7 | 45.0 | 50.7 |

Source: BBS, *Report on Labour Force Survey 1989*

It is believed that an Austro-Asian race first inhabited this region in an unknown prehistoric age. Then came the Dravidians, Aryans and Mongolians. Archaeological excavations show signs of powerful dynasties who ruled the land till the Muslims conquered it in the 11th century and established their rule. After more than 7 centuries of Muslim rule came the British who took over from the Muslims in the mid-18th century. In 1947, the British left and the country became part of Pakistan. The independent People's Republic of Bangladesh was born on 16 December 1971.

The four major religions are Islam, Hinduism, Buddhism and Christianity. The Muslims constitute about 87 per cent of the population. The constitution of the country guarantees full freedom of religious and cultural activities for all communities.

About 90 per cent of the people live in some 68,000 villages where men work in the fields from dawn to dusk tending crops and animals while women cook, wash and take care of the children at home. Rice and fish are common diet. Lunges and vest are the usual attire for men in the rural areas as opposed to shirts and trousers in the urban areas. Saree is women's common dress in both rural and urban areas. There are about half a million tribal people the majority of whom live in Chittagong Hill Tracts. The tribes have distinct cultures of their own.

## 1.2 The Socio-Economic Background

Bangladesh ranks 147 among the 173 countries for which the Human Development Index (HDI) has been derived (UNDP, 1993). As a least developed nation, it is greatly dependent on foreign aid for its economic development. In 1990, its total external debt amounted to US$12, 245.00 million. Of the Fourth Plan public sector allocation of Tk 419,300 million, 73.89 per cent is to come as external resources. Official development assistance (ODA) accounts for 10.5 per cent of the nation's GNP. About 37 per cent of the GDP originates from agriculture (at current prices), and the per capita GNP in 1991 was around $220. Life expectancy at birth is 51.8 years and the proportions of populations with access to health services and sanitation are 45 per cent and 10 per cent respectively. The daily calorie supply stands at 83 per cent of the requirement.

About 57 per cent of the rural families of Bangladesh are functionally landless and their numbers have been increasing. The landless families are classified into three categories. Category 1 includes those who have neither a homestead nor any cultivable land; category 2 consists of those who have only a homestead but no cultivable land; and category 3 includes those who have a homestead and cultivable land up to 0.50 acre. The situation of landlessness in the rural areas depicted in the Bangladesh Agricultural Census (1983-84) is shown in Table 1.3. The Ministry of Land points out that land ownership is highly skewed. About 5 per cent of the families having land above 7.5 acres own 26 per cent of the land and 70 per cent of the families having land below 2.5 acres own only 29 per cent of the land. The per capita availability of crop land is 0.24 acre.

Table 1.3

| Category | Number | Percentage |
|---|---|---|
| 1 | 1,198,000 | 8.7 |
| 2 | 2,714,000 | 19.6 |
| 3 | 3,898,000 | 28.2 |
| Total | 7,810,000 | 56.5 |

Source: The Ministry of Land, *Land Reforms in Bangladesh (1989)*, p 15

Despite the dilemmas confronting the socio-economic conditions of Bangladesh, there are certain inherent dynamisms in the economy, which may be pointed out as follows:

i) Bangladesh has established a unique national identity through the process of freedom struggle and war of independence.

ii) Bangladesh society has also achieved a substantial degree of vertical social mobility. The Bangladesh society in general is not differentiated by castes or tribes but mainly by differences in wealth and education. Such differences are more amenable to reduction through policy intervention.

iii) Although numerous, the poor and the disadvantaged groups in Bangladesh have displayed a remarkable resilience to survive against most adverse circumstances including repeated and severe natural calamities. When properly organized and supported, these groups show a very high degree of efficiency not only in resource use but also in savings, investment as well as technology adaptation and entrepreneurship.

iv) Women in Bangladesh are poised to play a more significant role in the development process if they can be brought to the mainstream of development process.

v) Over the last three decades, Bangladesh has gained valuable experience not only in the mechanism of social development based on innovative grassroots experiments but also in the process of structural adjustment needed for short term stabilization and long term growth.

## 1.3 Literacy and Education

Article 17 of the Constitution of the People's Republic of Bangladesh provides for: (a) establishing a uniform, mass-oriented, and universal system of education and extending free and compulsory education to all children to such stage as may be determined by law; (b) relating education to the needs of the society and producing properly trained and motivated citizens to serve those needs; and (c) removing illiteracy within such time as may be determined by law. The first compulsory attendance law (Act 27 of 1990) came into force in 68 Thanas in January 1992. (The literacy in Bangladesh is around 25 per cent only).

Education has been given the highest allocation in the revenue budget of 1992-93 (about 18.62 per cent) and its share in the current annual development programme is about 9.11 per cent. Tables 1.4 and 1.5 give summaries of the revenue budget and annual development programme (ADP) for education respectively. Public expenditure on education increased from 1.5 per cent of GNP in 1980 to 2.2 per cent of GNP in 1989.

Table 1.4 Revenue Budget for Education: 1990-1993
(amounts in thousand Taka)

| Subsector | 1990-91 (Accounts) | | 1991-92 (RE) | | 1992-93 (BE) | |
|---|---|---|---|---|---|---|
| | Amount | Per cent | Amount | Per cent | Amount | Per cent |
| Primary Education | 5,268,537 | 45.41 | 6,654,106 | 48.16 | 7,405,566 | 46.52 |
| Secondary & Higher Education | 4,666,646 | 40.22 | 5,089,114 | 36.84 | 6,308,550 | 39.63 |
| Technical Education | 271,013 | 2.34 | 333,986 | 2.42 | 330,236 | 2.07 |
| University Education | 1,030,050 | 8.88 | 1,170,725 | 8.47 | 1,229,500 | 7.72 |
| Others | 365,120 | 3.15 | 567,838 | 4.11 | 646,428 | 4.06 |
| Total | 11,601,366 | 100.00 | 13,815,769 | 100.00 | 15,920,280 | 100.00 |

Source: Ministry of Finance, *Demands for Grants and Appropriations (Non-development)*, 1992-93, p. 101.

Table 1.5 Annual Development Programme for Education: 1991-93
(in million Taka)

| Subsector | 1991-92 (Revised) | | 1992-93 (Budget) | |
|---|---|---|---|---|
| | Allocation | Per cent | Allocation | Per cent |
| Primary Education | 3385.219 | 72.36 | 5281.853 | 68.54 |
| Secondary & Higher Education | 418.300 | 8.94 | 1029.300 | 13.36 |
| Technical Education | 50.000 | 1.07 | 152.811 | 1.98 |
| University Education | 628.131 | 13.43 | 852.986 | 11.07 |
| MOE's Own Projects | 196.719 | 4.20 | 389.050 | 5.05 |
| TOTAL | 4678.369 | 100.00 | 7706.000 | 100.00 |

Source: Planning Commission, *Annual Development Programme*: 1992-93

Primary education is free and is on its way to being made compulsory. Although the adult literacy rate has increased in the recent years, in absolute figure, the number of illiterate adults increased from 32, 923, 083 in 1981 to 41, 961, 300 in 1990. In 1981, the proportion of illiterate urban adult population was 51.8 per cent as against 74.5 per cent for the rural adult population. Table 1.6 gives percentages of adult illiteracy in 1981 and 1990.

Table 1.6 Percentage of Illiterate Adults (1981 & 1990)

| | Urban Population | | | Rural Population | | | Total Population | | |
|---|---|---|---|---|---|---|---|---|---|
| Year | M | F | MF | M | F | MF | M | F | MF |
| 1981 | 42.0 | 65.9 | 51.8 | 64.5 | 84.7 | 74.5 | 60.3 | 82.0 | 70.8 |
| 1990 | - | - | - | - | - | - | 52.9 | 78.0 | 64.7 |

Source : UNESCO Statistical Yearbook 1991

Completion rates in Bangladesh are generally low at all levels, but especially in primary education. According to one source, in the mid-1980s, the proportions of grade 1 entrants surviving to grades 5, 8, 10 and 12 were 24 per cent, 17.8 per cent, 10.7 per cent, and 4.2 per cent respectively.

# Part II

# EDUCATION AND DEVELOPMENT PLANS

## 2.1 Structure

The educational pyramid of Bangladesh consists mainly of the following levels : (a) pre-primary, (b) primary, (c) secondary, (d) higher secondary or intermediate, (e) first degree and (f) Master's degree.

Following one or two years of pre-primary education (available mostly in the cities and some of the district headquarters), the primary level extends over a five-year period (grades 1-5) and caters for children of the age group 6-11. One of the major objectives of the Third Five-Year Plan (1985-90) was to enrol 70 per cent of the primary age-group children by 1990 and ensure their retention for completion of the primary cycle in order that universal primary education (UPE) could be achieved by the end of the century. In 1990, the numbers of pre-primary and primary schools were reported to be 1,515 and 45,917, respectively.

The secondary level consists of grades 6-10 (generally divided into two sub-levels viz. "junior secondary" consisting of grades 6-8 and "secondary" consisting of grades 9 and 10. At the end of grade 8, there is a Junior Scholarship examination taken by about 10 per cent of the children of grade 8, and at the end of grade 10 is the first public examination known as the Secondary School Certificate (SSC) Examination, which must be passed by all candidates seeking to move to the two-year higher secondary level (grades 11-12). At the end of grade 12 there is a further public examination leading to the Higher Secondary Certificate (HSC), which is a requirement for admission to first degree courses and appointment to secretarial positions in government services. While the bachelor's degree requires two years for pass and three years for honours courses, the master's degree extends over two years in the case of pass graduates and one year for honours graduates. A diagram explaining in outline the present educational structure of Bangladesh is given in Figure 1.

## 2.2 Secondary Education

The GOB and UNDP Study in 1992 on Secondary Education in Bangladesh documented their findings as described below.

*Goals and Objectives.* Since Bangladesh is yet to have an education policy document, there has been no official statement of the goals and objectives of secondary education in the country. The Bangladesh National Education

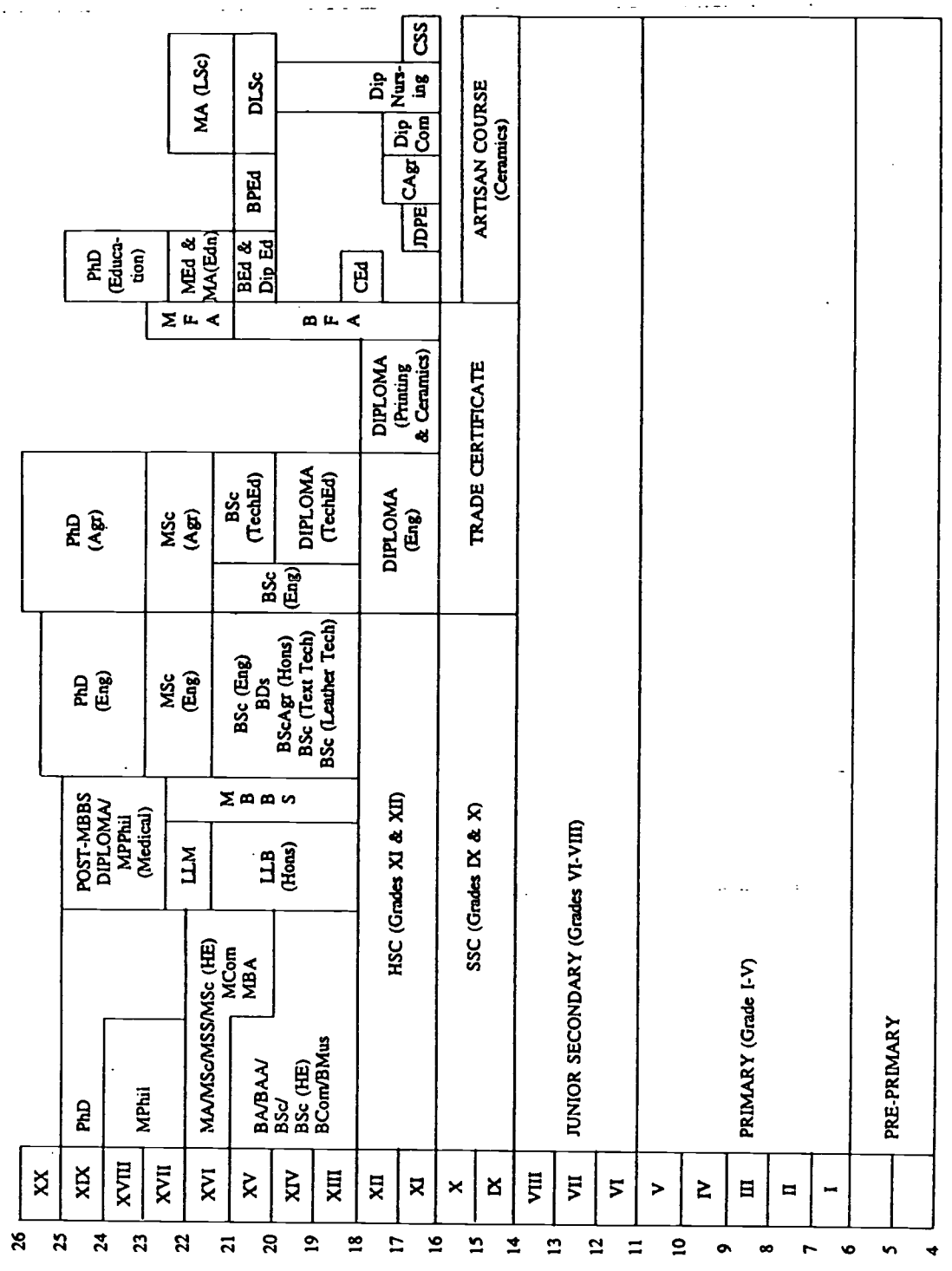
Commission, however, in its report (February 1988), laid down the following as aims and objectives of secondary education:

1. to extend and consolidate basic education received by pupils at the primary level;
2. to provide pupils with basic knowledge of different subjects (language, mathematics, science, religion, history, geography, economics, civics, home economics, environment, art and crafts, etc.).
3. to make pupils aware of moral and spiritual values;
4. to prepare pupils as part of dutiful and skilled manpower needed for economic development of the country;
5. to develop pupils as good citizens so that they become aware of their responsibilities, duties, and rights.
6. to develop among pupils knowledge-based democratic beliefs and a sense of moral values;
7. to help develop fully the potential abilities and possibilities of pupils;
8. to prepare meritorious pupils for higher studies in accordance with their merit and aptitude;
9. to help pupils develop confidence in their own thoughts and reasoning and become respectful to others' opinions;
10. to give pupils an education which would enable them to live better lives in their families, communities, and the whole world;
11. to prepare pupils for suitable vocations by increasing their ability for work; and
12. to improve the learners' physical and mental health.

*Institutions, Enrolments, and Teachers.* Bangladesh has a total of 10,715 secondary schools (including 2,000 junior high schools and 8,715 high schools), 14.11 per cent of the high schools being exclusively for girls. The number of government managed high schools is 316 (170 for boys and 146 for girls). During 1987-92, there has been an addition of 93 government high schools, which included 92 nationalized institutions and 1 newly established school. The number of government high schools increased from 141 in 1970 to 150 in 1980, 223 in 1987, and 316 in December 1992. The Fourth Plan document recommends abandoning the nationalization policy, as it blocks community participation and results in enrolment sizes less than the optimum.

While the secondary schools are college preparatory and do not provide for a vocational stream, there are 51 vocational training institutes (VTIs) under the Directorate of Technical Education and 12 technical training centres under the Ministry of Labour, which are intended for skill development in selected trades. In 1990, the numbers of trainees in the VTIs and technical training centres were 3,458 and 3,710 respectively. The corresponding numbers of teachers or instructors were 464 and 395.

Figure 1. Present Educational Structure of Bangladesh



The VTIs and technical training centres offer two-year courses (generally after grade VIII) in two separate programmes leading to National Skill Standard grade III at the end of the first year and National Skill Standard grade II on completion of the second year. The certificates are awarded by the Bangladesh Technical Education Board. Furthermore, there are a number of private technical schools which offer formal and non formal vocational courses. The major problems and issues in the area of skill development that need to be addressed are: (a) lack of coordination between institutions in the public and private sectors, (b) under-utilization of the existing facilities, (c) high dropout rates of the VTIs and technical training centres, (d) lack of linkage between the training institutions and the labour market, and (e) low female participation. (The technical and vocational education and training will be discussed in greater detail in the following chapters).

In 1991, the number of higher secondary schools ( intermediate colleges) and degree colleges were 323 and 547, respectively,* the number of institutions exclusively for girls being 100 (intermediate 37; degree 63). Of the 870 intermediate and degree colleges, 220 or 25.28 per cent are managed by the Government. Table 1.7 gives breakdown of enrolments of intermediate and degree colleges in 1991. It is revealed from the table that the proportions of females at the intermediate, degree (pass), degree (honours), and master's levels are 28.20 per cent, 18.98 per cent, 11.02 per cent and 3.39 per cent, respectively. The number of girls at the higher secondary level increased from 154,267 in 1989 to 163,509 in 1991.

Table 1.7 Enrolments of Intermediate and Degree Colleges (1991)

| Category | Intermediate Level | Degree (Pass) Level | Degree (Hons.) Level | Master's Level | Total |
|---|---|---|---|---|---|
| Intermediate Colleges | | | | | 85,385 |
| Male | 85,385 | - | - | - | 35,509 |
| Female | 35,509 | - | - | - | 120,894 |
| Total | 120,894 | - | - | - | |
| Degree Colleges | | | | | |
| Male | 330,930 | 194,465 | 39,685 | 11,901 | 576,981 |
| Female | 128,000 | 45,547 | 4,917 | 417 | 178,881 |
| Total | 458,930 | 240,012 | 44,602 | 12,318 | 755,862 |
| Total (both sexes) | 579,824 | 240,012 | 44,602 | 12,318 | 876,756 |

Source: BANBEIS

* A recent technical assistance study (TA 1489-BAN of the Asian Development Bank, Draft Final Report, October 1992) found the number of colleges of all categories (including intermediate and degree colleges, cadet colleges, teachers' training colleges, and commercial institutes) to be 940. All degree colleges, with the exception of three colleges of arts and crafts, have intermediate sections.

The numbers of institutions, pupils, and teachers at the secondary level for the period 1980-91 are given in Table 1.8. While the number of institutions increased by 2,230 during the period, enrolment increased by 1.01 million, and the number of teachers showed an increased of 44, 345. The teacher-pupil ratio, however, did not change materially. (In 1980, the teacher pupil ratio was 1:25.12 as against 1:24.35 in 1991. The average teacher-pupil ratio at the secondary level for Asia is 1:23). While the enrolment of girls increased from 28.33% in 1980 to 33.91%, the proportion of women teachers showed a negligible increase from 8.38 to 9.81 per cent.

Table 1.8 Institutions, Enrolments, and Teachers at the Secondary Level (1980-91)

| | Institutions | | | Enrolments | | | Teachers | | |
|---|---|---|---|---|---|---|---|---|---|
| | Junior High Schools | High Schools | Total | Male | Female | Total | Male | Female | Total |
| 1980 | 2,009 | 6,476 | 8,485 | 1,535,422 | 606,913 | 2,142,335 | 78,127 | 7,144 | 85,171 |
| 1985 | 2,248 | 7,196 | 9,444 | 1,742,505 | 840,806 | 2,583,311 | 82,951 | 9,290 | 92,241 |
| 1986 | 2,588 | 7,269 | 9,857 | 1,791,951 | 867,748 | 2,659,699 | 92,593 | 9,718 | 102,311 |
| 1987 | 2,291 | 7,681 | 9,972 | 1,848,626 | 893,626 | 2,741,824 | 103,208 | 11,026 | 114,234 |
| 1988 | 2,267 | 7,890 | 10,157 | 1,879,404 | 928,143 | 2,807,547 | 105,403 | 11,432 | 116,835 |
| 1989 | 2,330 | 7,890 | 10,220 | 1,928,693 | 971,945 | 2,900,638 | 110,668 | 11,802 | 122,470 |
| 1990 | 2,311 | 8,137 | 10,448 | 1,977,988 | 1,015,745 | 2,993,733 | 111,016 | 11,880 | 122,896 |
| 1991 | 2,000 | 8,715 | 10,715 | 2,085,941 | 1,070,178 | 3,156,119 | 116,905 | 12,711 | 129,616 |

Source: BANBEIS

Note: In 1991, the number of high schools exclusively for girls was 1230 (0r 14.11%).

While the urban population constitutes about 16% of the total population, 19.51% of the secondary schools are located in the urban areas. Furthermore, as shown in Table 1.9, the urban enrolment and urban teachers represent 28.79% and 26.45% of the respective totals. The urban institutions have a higher average enrolment than the rural schools.

Table 1.9 Proportions of Schools, Enrolments, and Teachers at the Secondary Level in Urban and Rural Areas

| Year | Schools (%) | | Enrolments (%) | | Teachers (%) | |
|---|---|---|---|---|---|---|
| | Urban | Rural | Urban | Rural | Urban | Rural |
| 1988 | 19.59 | 80.41 | 30.28 | 69.72 | 26.88 | 73.12 |
| 1989 | 19.76 | 80.22 | 29.06 | 70.94 | 26.58 | 73.42 |
| 1990 | 19.51 | 80.49 | 28.79 | 71.21 | 26.45 | 73.55 |

Source: Calculated from BBS, Bangladesh Education Statistics 1991

An Outline of the Educational Structure of Bangladesh
September 1987

*Acronyms:*

| | | | |
|---|---|---|---|
| Agr | Agriculture | HE | Home Economic |
| BAU | Bangladesh Agricultural University | HSC | Higher Secondary Certificate (after 12 years of schooling) |
| BCom | Bachelor of Commerce | JDPE | Junior Diploma in Physical Education |
| BDS | Bachelor of Dental Surgery | LLB | Bachelor of Laws |
| BFA | Bachelor of Fine Art | LLM | Master of Laws |
| BMus | Bachelor of Music | LSc | Library Science |
| BPEd | Bachelor of Physical Education | MBA | Master of Business Administration |
| BSS | Bachelor of Social Science | MBBS | Bachelor of Medicine and Bachelor of Surgery |
| BUET | Bangladesh University of Engineering & Technology | MCom | Master of Commerce |
| CAgr | Certificate in Agriculture | MFA | Master of Finance Administration |
| CEd | Certificate in Education | MPhil | Master of Philosophy |
| CSS | Certificate in Secretarial Science | MSS | Master of Social Science |
| DipCom | Diploma in Commerce | SSC | Secondary School Certificate (after 10 years of schooling) |
| DLSc | Diploma in Library Science | | |
| Eng | Engineering | TechEd | Technical Education |
| | | Text Tech | Textile Technology |

## 2.3 Development Plans

Development Planning in Bangladesh passed through five successive stages -- the First Five-Year Plan (1973-78), the Two -Year Plan (1978-80), the Second Five-Year Plan (1980-85), the Third Five-Year Plan (1985-90), and the Fourth Five-Year Plan (1990-95). Table 1.10 gives the sizes, outlays, and targets of the five plans.

*The First Plan and the Two-Year Plan.* The total allocation for education during the First Plan and the Two-Year Plan amounted to Tk 454.00 crore (one crore = 10 million) while total ADP provision during the concerned period (1973-80) came to Tk. 289.52 crore. Actual utilization, however, was around Tk. 258.85 crore, which represented 57.02% of the Plan allocation and 89.41% of the ADP provision. As Table 1.11 shows, actual expenditure on the universities exceeded expenditures on primary and secondary education taken together.

*The Second Plan.* The Second Plan, for the first time, made a commitment for universal primary education (UPE) and initiated a mass education programme for illiterate adults. In the education sector, the highest allocation of 49.48% went to primary education.

Table 1.10 Plan Sizes, Outlays, and GDP Growth Rates
(at respective base-year prices)

| | Plan size (Crore Taka) | | | | Annual GDP Growth (%) | |
|---|---|---|---|---|---|---|
| Plan | Public Sector | Private Sector | Total | Actual Outlay (Crore Taka) | Target | Actual |
| First Plan (1973-78) | 3,952 | 503 | 4,455 | 2,074 | 5.5 | 4.0 |
| Two-Year Plan (1978-80) | 3,261 | 600 | 3,861 | 3,359 | 5.6 | 3.5 |
| Second Plan (1980-85) | 11,100 | 6,100 | 17,200 | 15,297 | 5.4 | 3.8 |
| Third Plan (1985-90) | 25,000 | 13,600 | 38,600 | *26,639 | 5.4 | 3.8 |
| Fourth Plan (1990-95) | 41,930 | 27,000 | 68,930 | - | 5.0 | - |

Source: The Fourth Five-Year Plan (Revised Draft II, March 1991)

* Includes Tk. 16, 757 crore in the public sector and Tk. 9,882 crore in the private sector.

Note: A revised Fourth Plan has been approved by the National Economic Council on 7 March 1993. The size of the revised Plan has been reduced to Tk. 62,000 crore (public sector: Tk. 34,700 crore; private sector: Tk. 27,300 crore).

Table 1.11 Development Expenditure on Education During the First Plan and the Two-Year Plan: 1973-80
(allocations and ADP provisions in Crore Taka)

| Subsector | Allocation | ADP Provision | Actual Expenditure | Expenditure as % of Allocation | Expenditure as % of ADP Provision |
|---|---|---|---|---|---|
| Primary Education | 80.04 | 36.80 | 34.11 | 42.62 | 92.69 |
| Secondary Education | 88.65 | 35.05 | 30.11 | 33.97 | 85.90 |
| College Education | 38.55 | 17.18 | 14.76 | 38.28 | 85.91 |
| Teacher Education | 28.23 | 10.18 | 7.92 | 28.05 | 77.80 |
| Other Educational Activities (DPI) | 18.54 | 49.38 | 47.99 | 258.94 | 97.19 |
| Technical Education | 88.63 | 59.51 | 47.07 | 53.11 | 79.10 |
| University Education | 57.16 | 69.11 | 68.30 | 119.49 | 98.83 |
| MOE's Own Schemes | 54.20 | 12.31 | 8.59 | 15.84 | 69.78 |
| Total | 454.00 | 289.52 | 258.85 | 57.02 | 89.41 |

Source: The Second Five-Year Plan

In secondary education, 15 projects were undertaken. The major programmes included: (a) development of 400 community schools at the Thana level for providing low-cost non formal vocational education to the rural populace, (b) introduction of new science course in non-government secondary schools, and (c) development of selected nationalized, government and non-government high schools. Twenty-five non-government high schools were nationalized, 4 colleges of education were converted into TTCs, and 10 TTCs were developed. Table 1.12 gives programme-wise development allocations and expenditures during the Second Plan.

Table 1.12 Public Sector Allocations and Expenditures on Education during the Second Plan: 1980-85 (allocations and expenditures in current prices; Crore Taka)

| Programme | Allocation | | Expenditure | |
|---|---|---|---|---|
| | Amount | % | Amount | % |
| Primary Education | 331.68 | 49.48 | 210.70 | 43.84 |
| Mass Education | 6.98 | 1.04 | 9.41 | 1.96 |
| Secondary Education | 86.86 | 12.95 | 75.33 | 15.67 |
| Madrasah Education | 2.18 | 0.33 | 1.70 | 0.35 |
| Teacher Education | 9.52 | 1.42 | 13.13 | 2.73 |
| College Education | 19.09 | 2.85 | 19.02 | 3.96 |
| Scholarships | 50.00 | 7.46 | 47.53 | 9.89 |
| Technical Education | 88.18 | 13.15 | 49.14 | 10.22 |
| University Education | 48.85 | 7.29 | 50.91 | 10.60 |
| Educational Planning, Administration & Management | 72.02 | 4.03 | 3.72 | 0.78 |
| Total | 670.36 | 100.00 | 480.59 | 100.00 |

Source: The Third Five-Year Plan (1985-90)

*The Third Plan.* In the Third plan period (1985-90), development outlay on education amounted to Tk. 9,723.50 million including Tk. 5,269.10 million on primary education, Tk. 985.50 million on secondary education, and Tk. 396.40 million on teacher training (general), the respective proportions being 54.19%, 10.14%, and 4.08% respectively. The total expenditure on secondary education included Government contribution of 172.80 million and project aid of Tk. 812.70 million. The following were the main achievements in the area of secondary education during the Third Plan:

a) At the Thana level, 400 high schools were developed as community schools and 55,000 persons (out of a target of 168,000) were trained in various trades. The programme came to an end in June 1988.

b) A total of 4,000 non-government institutions (including 3,800 high schools and 200 madrasahs) have been developed under the Secondary Science Education Sector Project (SSESP). The project included provision of laboratories, science equipment, and books. A FREPD evaluation (September 1991) of the SSESP reveals that on an average, 7.28 science classes and 2.94 other classes per week are held in the rooms constructed under the SSESP, the utilization index being below the desired level.

c) Classroom accommodation has been enhanced and furniture, tools, equipment, and books have been provided to 79 government high schools.

*The Fourth Plan.* In the Fourth Plan (1990-95), the public sector allocation for education is of the order to Tk. 23,627.30 million or 5.63% of the total public sector allocation of Tk. 419, 300.00 million. The allocation for education includes Tk. 12138.90 million (51.37) for primary education, Tk. 4463.50 million (18.89%) for secondary education, and Tk. 105.00 million (0.44%) for teacher training. The objectives and strategies emphasized by the Plan, particularly in relation to secondary education, include, inter alia, the following:

a) optimum use of the existing facilities and optimum enrolment in the schools;

b) enhanced participation of girls;

c) adhering to a minimum standard of library and laboratory;

d) strengthening academic supervision and administrative inspection of schools through restructuring of the relevant organizations;

e) professional strengthening of the National Curriculum and Textbook Board (NCTB) in order that the curricula and syllabuses can keep pace with the international modernization trends;

f) extension education and management training for teachers and educational administrators; and

g) environmental education for teachers and students at all levels.

The Fourth Plan has also suggested a number of programmes that would contribute to its objectives. These include: (a) completing spill-over components of the on-going projects for enhancing physical facilities of 79 government schools, (b) a rehabilitation project involving 2,525 secondary schools, (c) major renovation of some 250 government secondary schools, (d) implementing the policy of tuition fee exemption for girls of grades 6-8 in the non-municipal areas, (e) a large -scale stipend programme for the rural secondary girls, (f) strengthening academic and administrative supervision of the Directorate of Secondary and Higher Education (DSHE) through appropriate reorganizations, and (g) creation of an Education Service Commission.

# Part III

# TECHNICAL EDUCATION SYSTEM

## 3.1 Formal Technical Education

The formal technical education in Bangladesh is offered in three tiers, with degree level engineering courses at the top, diploma level technician courses at the middle and the certificate level craft courses at the bottom. Degree level engineering courses (grades XIII-XVI) are offered at the Bangladesh University of Engineering and Technology (BUET) located at Dhaka, and four Bangladesh Institutes of Technology (BITs) located at Dhaka, Chittagong, Rajshahi and Khulna. BITs were previously Engineering Colleges under the administrative control of the Directorate of Technical Education. Now they are autonomous institutions controlled by BIT Council headed by the Minster of Education. Like all other universities BUET is an autonomous institution financed through the University Grants Commission. The middle level courses (Grade XI-XIII) are offered in 20 Polytechnic Institutes, 3 Monotechnic Institutes located mostly at district headquarters. Certificate craft courses are offered in 51 Vocational Training Institutes and 12 Technical Training Centres (TTCs) including Institute of Marine Technology. The VTIs are under the administrative control of Directorate of Technical Education (DTE) and the TTCs are under the Bureau of Manpower, Employment and Training (BMET).

## 3.2 Historical Development

The sources of policy formulation in respect of all forms of education including technical and vocational education and training (TVET) are primarily the reports of Education Commissions formed from time to time with the renowned educationists and thinkers of the country.

In 1947, the area constituting present Bangladesh had a very meager institutional base for technical education and the educational/training facilities were scattered under different organizations. The inadequacy of the TVE system was keenly felt when the economic development programmes were first launched in the fifties. Only a few institutions (e.g. the Ahsanuallah Engineering College, the Dhaka Polytechnic Institute, the Textile Technical Institute, the Leather Technology Institute and the Ceramic Institute) were functioning in Dhaka (capital). In the rest of the country, there were a few industrial/technical institutes for training artisans and craftsmen, land surveyors and construction supervisors. The development of technical education was very slow till the sixties.

### *Establishment of the Directorate of Technical Education*

Although all Education Commissions highlighted the importance of TVET and its role in creating a skilled manpower needed for rapid industrialization and economic growth, the National Education Commission of 1959 made specific recommendations which, inter alia, included the establishment of a separate Directorate of Technical Education with a view to developing a well-knit system of technical education in the country. The establishment of the Directorate of Technical Education in 1960 under the Ministry of Education (MOE) was a milestone in the historical development of formal TVE system and the country witnessed a phenomenal expansion during the sixties. Most of the institutional bases in the areas of engineering, technician and vocational education were created during the sixties.

### *The Technical Education Act of 1967*

The Technical Education Act of 1967 (Act 1 of 1967) creating the East Pakistan (now Bangladesh) Technical Education Board under the MOE was another landmark in the history of TVET in Bangladesh. Through the Act, the Bangladesh Technical Education Board (BTEB) is entrusted with organizing, regulating, supervising, controlling and developing technical education which include courses belonging to the middle level technician education and also to craft level vocational education and training. The diploma and certificate level of teacher training are also under its control. BTEB is a statutory body having the primary responsibility of curriculum development, conducting of examinations and awarding certificates of performance. Although created under the MOE, the BTEB exercises academic control over different institutions falling under different Ministries.

### *Vocational Training Legislation and Policy*

There are two legislations that directly involve vocational education.

- The Technical Education Act of 1967 creating the East Pakistan (now Bangladesh) Technical Education Board (BTEB) as described above.
- Apprentice Ordinance, 1962.

Four other legislations are also relevant to vocational training:

- Motor Vehicles Ordinance, 1983 replacing the earlier Motor Vehicles Act, 1939.
- Inland Shipping Ordinance, 1976
- Boiler Act, 1923
- Electricity Rules, 1937

### *Creation of National Council for Skill Development and Training (NCSDT)*

The important policy paper in respect of vocational education is the Government Resolution No. S-II/TA-1/78 dated 23 April 1979 creating the National Council for Skill Development and Training (NCSDT). The Resolution gives wide

scope and coverage to skill development through institutional and non-institutional methods, including skill setting standards and operating the testing and certification system. It is to be noted that Technical Education Act of 1967 and the Resolution of NCSDT overlap in the area of institutional training (relating to vocational/craft education and training). The NCSDT has tried to resolve some of them by allowing the BTEB to function as per its charter. Through one of its Resolutions, the NCSDT has relieved its secretariat (Training Services Wing of the BMET) of certain functions, like skill testing and certification and entrusted this to BTEB.

Part IV

# MAJOR TVE ORGANIZATIONS

## 4.1 The Directorate of Technical Education

The Directorate of Technical Education (DTE) is headed by a Director-General who has under him the following wings for management of educational institutions and implementation of their development programmes.

1. ***Administration Wing***

This wing is headed by a Director who is responsible for looking after appointment, transfer and other related matters of personnel administration along with operational budget for the whole Directorate. He is assisted by 3 Assistant Directors, one Budget and Accounts Officer, and one Administrative Officer. There are 46 supporting officers and other staff who render the necessary help for smooth functioning of the wing.

2. ***Planning Wing***

The responsibility of this wing is general planning for expansion and other development activities of the Directorate, preparation and processing of development schemes and annual development plans and development budget. The wing is headed by a Director who is assisted by 2 Assistant Directors, 1 Project Officer, 1 Equipment Officer, 1 Draftsman and 15 supporting staff.

3. ***Programme Inspection Wing***

This wing has been set up primarily for organizing and helping various institutions for industrial attachment of final year students for practical training. The wing is composed of one senior specialist and three specialists who make liaison with different industrial organizations and help the respective Principals for placement of students for training. They are also given the responsibility of visiting institutions for identifying the various difficulties being faced by the institutions and to give possible on the spot suggestions to mitigate the same and report for further actions needed by the head office.

4. ***Vocational Training Wing***

This wing is responsible for administration, control and management of all programmes relating to trade training under the Directorate of Technical Education. The wing is headed by a Director who is assisted by 1 Assistant Director, 1 Equipment Officer, 1 Project Officer and 1 Procurement Officer

and 15 supporting staff. Under the wing there are 4 Inspectorates for inspection of the training programme of vocational training institutes and grant-in-aid for non-government and non-formal training organizations. Each Inspectorate has 1 Inspector, 1 Assistant Inspector and 8 supporting staff for the office.

5. *Project Implementation Unit*

This unit is headed by a Project Director and is responsible for execution of development schemes-construction of buildings, procurement of equipment etc. The Project Director is supported by 1 Project Officer, 1 Equipment Officer, 2 Assistant Project Officers and 1 Assistant Equipment Officer. There are 38 supporting staff for smooth functioning of the unit. At every work site technical and supporting staff are appointed for on-job supervision purpose.

The organogram of Directorate of Technical Education may be seen in Figure 2. The different institutions in the administrate control of DTE may be seen in Annex 1.

## 4.2 The Bangladesh Technical Education Board (BTEB)

BTEB is a key organization in TVE system in Bangladesh. As pointed out earlier, BTEB is a statutory organization established through Technical Education Act of 1967. Although it operates under the administrative umbrella of the Ministry of Education, it is an autonomous institution having jurisdiction over the whole country and can exercise academic control on institutions belonging to different Ministries, Directorates, private organizations, industries, corporations and NGOs. It is primarily a self-supporting organizations, collecting operating capital from institution's accreditation and trainees examination fees, etc. The NCSDT has authorized BTEB to conduct admission test and skill certification for NSS III and II for both public and private institutions. The TVE institutions under the Ministry of Education are affiliated academically with the BTEB. As constituted by an act of Parliament, BTEB enjoys a unique position to give leadership in the promotion and development of TVET in Bangladesh.

The organizational structure may be seen at Figure 3. The figures show the number of persons. World Bank Report (No. 7606-BD, June 28, 1989) views that "BTEB is a small but effective organization."

*Functions of BTEB*

The main functions of the Board are:

- To prescribe the courses of instructions;
- To arrange for development of learning materials;
- To grant, withhold or with-draw the affiliation to the concerned institutions;
- To prescribe the conditions governing the admission and transfer of students;

- To prescribe the manner and mode of inspection;
- To monitor the teaching-learning activities of the institutions;
- To arrange distance learning processes/activities;
- To conduct and regulate the examinations, evaluate the performances and publish results thereof; and,
- To grant diploma/certificate to the passed out graduates.

### *The Courses offered by BTEB*

The various courses offered by BTEB are:

- Diploma Courses in Engineering or Technology;
- Diploma Courses in Technical Teacher Education;
- Diploma Courses in Commercial Teacher Education;
- Diploma Courses in Commercial Training;
- Certificate Courses in Technical Teacher Education;
- Certificate Courses in Sub-overseer, Survey Final and Aminship;
- Certificate Courses in Various Trades and Crafts; and,
- Such other types of Technological, Commercial Trades and Crafts Courses as may be determined by the Board, subject to the approval of the Controlling Authority.

### *The Affiliated Courses under BTEB*

The affiliated courses of the BTEB with duration and entry requirement are as follows:

| | Name of the Course | Duration (year) | Entry Requirement |
|---|---|---|---|
| 1. | Diploma Technical Teacher Education | 1 | Diploma Engineering |
| 2. | Diploma Engineering: Automobile, Chemical, Chemical Food, Civil, Electrical, Electronics, Industrial Wood, Mechanical, Power. | 3 | SSC or its equivalent |
| 3. | Diploma Architecture | 3 | SSC or its equivalent |
| 4. | Diploma Agriculture | 3 | SSC or its equivalent |
| 5. | Diploma Marine, Graphic Arts, Ceramics | 3 | SSC or its equivalent |
| 6. | Diploma Survey Technology | 1 | Survey Final Certificate |
| 7. | Diploma Forestry | 2 | HSC or its equivalent |
| 8. | Diploma Commerce | 2 | SSC or its equivalent |
| 9. | Diploma Vocational Teacher Education | 1 | Certificate Vocational Teacher Education |
| 10. | Sub-Overseer | 2 | SSC or its equivalent |
| 11. | Survey Final | 1 | Aminship Certificate |
| 12. | Aminship | 1 | SSC or its equivalent |

| | Name of the Course | Duration (year) | Entry Requirement |
|---|---|---|---|
| 13. | Certificate Vocational Teachers Education | 1 | SSC or its equivalent with Trade Certificate |
| 14. | Certificate Textile | 2 | SSC or its equivalent |
| 15. | Certificate Leather | 2 | SSC or its equivalent |
| 16. | Trade Courses NSS Grade-II:<br>a) Automotive, Carpentry, Civil Construction (Masonry), Electrical, Farm Machinery, Foundry, General Mechanics, Machinist, Plumbing, & Pipe Fittings, Turner and Welding.<br>b) Drafting (Civil), Drafting (Mech), Radio & TV, Refrigeration and Air conditioning. | 1<br><br>1 | NSS Grade-III<br><br>SSC or its equivalent |
| 17. | Trade Courses NSS Grade-III<br>a) Automotive, Carpentry, Civil Construction, (Masonry), Electrical, Farm Machinery, Foundry, General Mechanics, Machinist, Plumbing & Air conditioning.<br>b) Drafting (Civil), Drafting (Mech), Radio & TV Refrigeration & Air conditioning | 1<br><br>1 | Class-VIII<br><br>SSC or its equivalent |
| 18. | Certificate Graphic Arts | 1 | SSC or its equivalent |
| 19. | Certificate Secretarial Science | 1 | SSC or its equivalent |
| 20. | Artisan Ceramics | 1 | Class VIII |
| 21. | Artisan Textile | 1 | Class VIII |
| 22. | Artisan Leather | 1 | Class VIII |
| 23. | Certificate Business Typing | 6 mos | SSC or its equivalent |

***The Enrolment in Different Courses under BTEB***

| Technology/Course | Enrolment Capacity 1st Year |
|---|---|
| Teachers Training | |
| Diploma Technical Education | 120 |
| Certificate Vocational Teacher Education | 120 |
| Total | 240 |
| Diploma Courses | |
| Civil | 1160 |
| Electrical | 820 |
| Mechanical | 740 |
| Power | 680 |
| Electronics | 200 |
| Chemical | 40 |
| Chemical Food | 20 |
| Automobile | 20 |
| Industrial Wood | 20 |
| Total | 3700 |
| Other Diploma Courses | |
| Architecture | 80 |
| Agriculture | 440 |
| Marine | 40 |
| Printing | 50 |
| Ceramics | 40 |
| Forestry | 120 |
| Commerce | 120 |
| Survey | 40 |
| Total | 930 |
| Sub-Technician Courses | |
| Survey Final | 60 |
| Aminship | 80 |
| Secretarial Science | 40 |
| Training-in-Business Typing | 1000 |
| Textile | 240 |
| Total | 1420 |

*Trade Courses*

Enrolment Capacity of the Technical Training Centres and Vocational Training Institutes, Trade wise.

| Trade | Enrolment Capacity | | |
|---|---|---|---|
| | TTC | VTI | Total |
| Automotive | 320 | 260 | 580 |
| Electrical | 355 | 540 | 895 |
| Welding | 205 | 280 | 485 |
| Carpentry | 280 | 100 | 380 |
| General Mechanics | 300 | - | 300 |
| Drafting (Civil) | 160 | 80 | 240 |
| Drafting (Mech) | 135 | - | 135 |
| Farm Machinery | - | 720 | 720 |
| Foundry | - | 20 | 20 |
| Machinist | 110 | 320 | 430 |
| Civil Construction (Masonry) | 280 | 60 | 340 |
| Plumbing & Pipe Fitting | 145 | 60 | 165 |
| Radio & TV | 135 | 200 | 335 |
| Refrigeration & Air Conditioning | 100 | 60 | 160 |
| Turner | 120 | 20 | 140 |
| Total | 2645 | 2680 | *5325 |
| Textile Artesian | | | 420 |

* This total is only for Part-I and the same number of seats are available for Part-II Trade Course.

The number of graduates from different levels of institutions may be seen in Annex 2.

## 4.3 NCSDT and BMET

The National Council for Skill Development and Training (NCSDT) was created in 1979 through Resolution, in order to co-ordinate efforts of different agencies involved in skill training, to avoid duplication of efforts, to bring training, to a recognized level of standard to achieve national skill standard. The Council has representation of 17 concerned Ministries, 2 Members of Parliament, representative of trade unions and other related agencies, under the Chairmanship of cabinet Minister-in-charge of the Ministry of Labour and Manpower.

The NCSDT is primarily responsible for:

a) Establishment of trade standards;
b) Establishment of national level policies relating to skill training; and
c) Recommendation of enactment of legislation pertaining to skill development and training.

Figure 2. Organogram
Director of Technical Education, Bangladesh, Dhaka

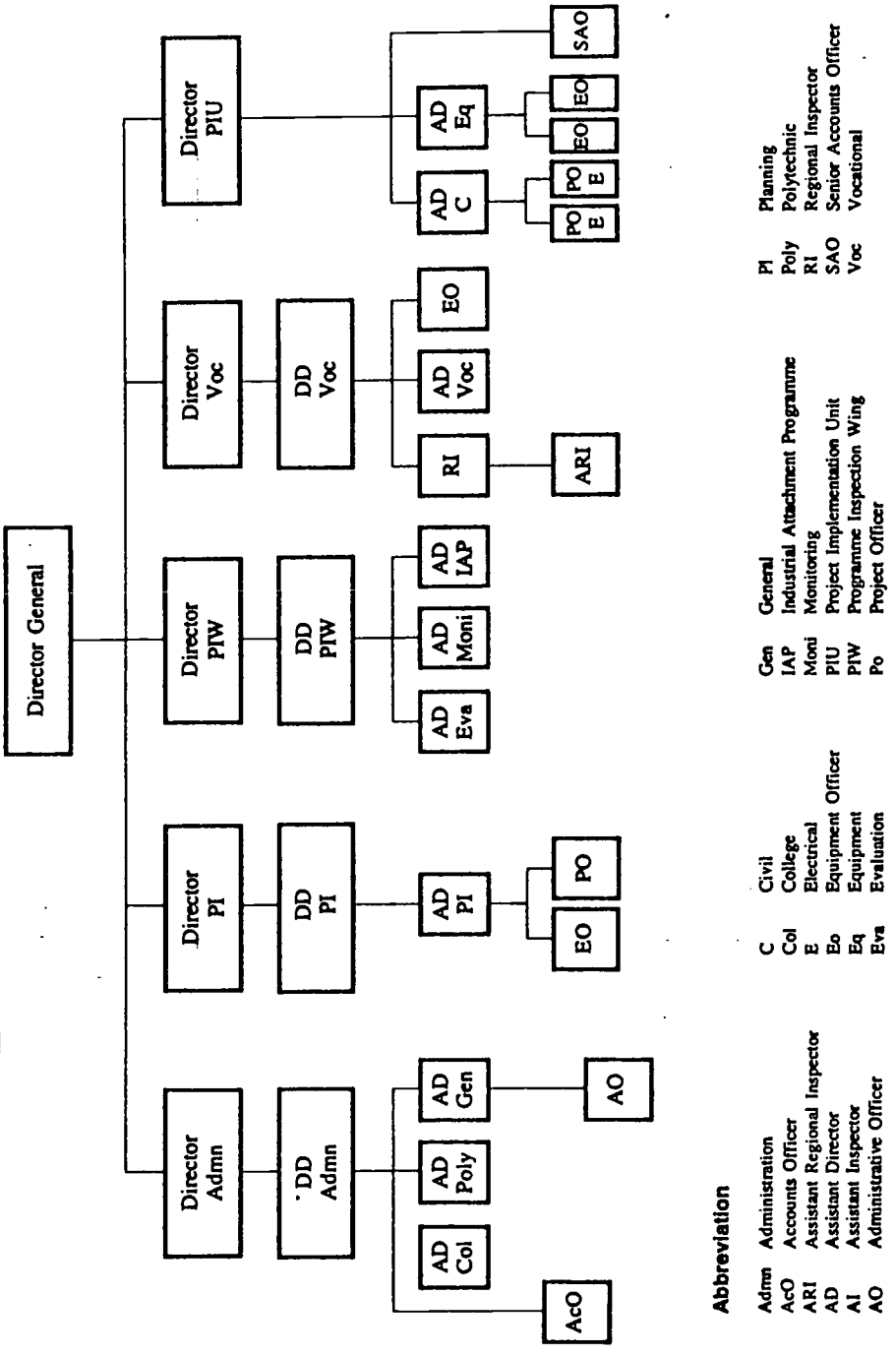
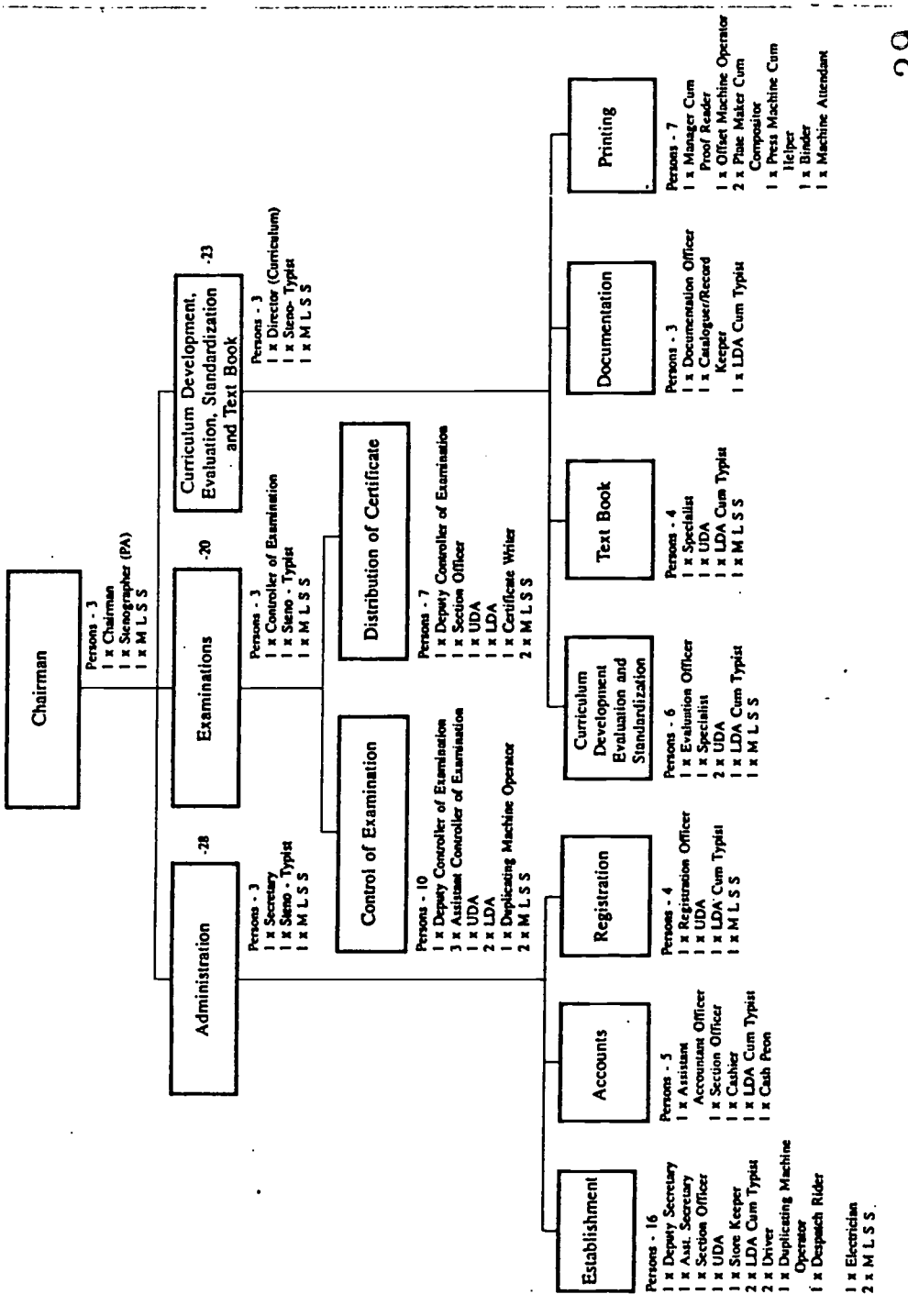


Figure 3. The Present Organizational Structure - 74

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The Bureau of Manpower, Employment & Training (BMET) acts, as Secretariat of the NCSDT. The NCSDT, a high-level, inter-ministerial organization, is intended to provide macro-level policy direction and other national level service relating to skill training areas.

The institutions under BMET may be seen in Annex 3.

## 4.4 Non-Institutional Training

The following excerpts (ILO, 1992, pp 62-64) are the best available account of non-institutional training in Bangladesh.

*Training Programmes*

A wide variety of non-institutional programmes are conducted by government departments, semi-government agencies, non governmental organizations (NGOs), and private enterprises. Information on the programmes is not available with any single authority.

The *Association of Development Agencies of Bangladesh (ADAB)*, which co-ordinates the work of international, national, and local NGOs, and the *Association of Private Non-Profit Trade Schools (APNTS)*, which promotes the activities of private trade schools (many owned by the NGOs), do not keep statistics. Contact with them gave the idea that the number of programs may exceed 1,000 and over 100 NGOs are active in the field. About 30 NGOs are conducting school-based training in trades like electrical wiring, mechanic, carpentry, lathe operation, and welding.

The activities of some of the organizations running regular courses are described below:

The *Bangladesh Industrial Technical Assistance Centre*, a semi-government organization under the Ministry of Industries, undertakes initial training for new entrants in technical careers and advanced training for already-employed skilled workers to boost industrial productivity. Each programme is of 14 weeks' duration and conducted thrice a year. Both theoretical and practical instructions are given. In 1985-91, 1,746 persons were trained in different trades, about 30 per cent of whom came from the private sector and the rest from the public sector.

The *Mirpur Agricultural Workshop and Training School (MAWTS)* is a training-cum-production-cum-research centre set up specifically to carry out repair and maintenance of agricultural equipment for mechanized cultivation and irrigation and impart training to mechanics/operators. Since inception, out of the 1,528 trainees admitted, 1,296 have graduated.

The *St Joseph School for Industrial Trades* is a training-cum-production school offering courses in machine shop, fitting and welding, electrical wiring, engine repair, and carpentry, each of 45 weeks. Enrolment is for about 150 trainees. Trainees spend about half the time on training and half in production shops as

unpaid workers. The school is primarily self-supporting as costs are covered by fees and income from production.

The *Underprivileged Children's Education Programme (UCEP) Technical School-1* is relatively a large training school run by the UCEP, Dhaka, a NGO. It offers courses in welding, carpentry, automobile, electrical, refrigeration and air-conditioning, electronics, printing, weaving, spinning, tailoring, and knitting, ranging from 1.5 to 3.55 years.

The training programmes conducted by a few government and semi-government departments, NGOs, and private agencies are described below:

The *Department of Youth Development (DYD)* provides training to drop-outs in the 15-30 years' age group, e.g. in technical trades, secretarial courses, dressmaking, block and batik printing, pisciculture, livestock rearing, poultry rearing, etc. Between 1986-90, it trained about 31,300 youth.

The *Directorate of Technical Education* implements training programs for the DYD through its subordinate educational institutions. Polytechnic Institutes trained 12,008 youth during 1988 in drafting, welding, motor repair, etc. Through the VTIs, about 2,300 youth were trained in 1988 in trades like mechanic, carpentry, etc. The Glass and Ceramic Institute and the Graphic Arts Institute trained 90 and 177 youth during 1987 and 1988 respectively. Through 17 Commercial Institutes under the DTE, 3,000 youth were trained in secretarial science and accounting.

The *Bangladesh Small and Cottage Industries Corporation*, a semi-government corporation under the Ministry of Industries, offers training in trades and handicrafts through its 5 VTCs established in regional locations outside Dhaka. Training is also offered in other locations in skill areas not requiring fixed equipment for training. Three distinct broad fields are covered, i.e. women's crafts, handicrafts, and industrial crafts. Most of the courses are for 4 months and some for 6. It has one training institute, the Small Cottage Industries Training Institute (SCITI), in Dhaka, which offers courses to persons engaged in developing small and cottage industries. The SCITI conducts mostly 1/2 week courses in entrepreneurship development, industrial management, marketing management, and financial management. It has so far trained 5,099 persons, including 7 participants from Nepal.

The *Bangladesh Handloom Board* trains loomless weavers in weaving and loom technology. About 2,000 weavers were trained between 1978-87.

The Savar Peoples Health Centre started as a clinic and developed into training-cum-production complex for its own workers, mostly women, in trades related to shoe making, jute bag making, printing, plastic product making, metal work, carpentry, bakery, and herbal medicine.

### *Upgrading Training*

Government departments, semi-government agencies, and large industries, have developed training facilities for upgrading their workforce and supervisory

personnel, mostly for the unskilled to semi-skilled, semi-skilled to skilled, and skilled to highly-skilled levels, including operatives, assembly-line workers, and maintenance and repair personnel. The programmes vary considerably and, there is no central authority to correctly record data on the programmes. The departments/agencies are not in a position to furnish data as they do not have a monitoring system. The upgrading training programmes of some of the government ministries/departments and semi-government agencies are briefly described below:

The *Ministry of Health* conducts training programmes at the primary health care level. It also has 2 Paramedic Institutes for training in occupations like radiographer, laboratory technician, compounder, sanitary inspector, etc. and 76 Nurse Training Centres.

The *Ministry of Shipping*, through 3 Marine Training Schools, trains seamen and inland and sea-going personnel.

The *Ministry of Energy and Natural Resources* provides training in house wiring for the rural electrification programme.

The *Bangladesh Power Development Board*, through 3 Specialized Training Centres (in Ashuganj, Ghorasal, and Khulna), 4 Regional Training Centres (in Rajshahi, Khulna, Chittagong, and Tongi) and one Engineering Academy (in Kaptai), is engaged in upgrading engineers, technicians, tradesmen, and other non-technical officers and staff.

The *Bangladesh Railways* has a skill upgrading programme for its subordinate technical staff. In addition to a well-organized Training Academy in Chittagong, it operates 4 Diesel Locomotive Training Centres in Dhaka, Chittagong, Parbatipur, and Lalmonirhal. Through the training centres, it conducts basic, promotion, refresher and special courses. During 1991, it programmed 244 courses for 5,077 trainees.

The *Bangladesh Jute Mills Corporation* has 4 training centres with a yearly training capacity of 2,578. The courses run for 1 to 6 weeks. In 1989-90, the centres trained 1,020 workers with a capacity utilization of about 40 per cent only.

The Central Fertilizer Training Institute (CFTI) of the *Bangladesh Chemical Industries Corporation* in Ghorasal has been set up to train technical personnel of the existing and planned fertilizer factories in the country. The CFTI can train 250 persons annually.

The Bangladesh Machine Tools Factory, General Electric Manufacturing Plant, and Chittagong Steel Mills, under the *Bangladesh Shipbuilding and Engineering Corporation*, run training centres for developing the skills of their workforce.

### *Apprenticeship Training*

The Apprenticeship Ordinance, 1962 stipulates that certain categories of industrial undertakings are obliged to take a specified number of apprentices for

training in the relevant trades and occupations. The duration of such training may vary according to trade and occupation. An apprentice is not an employed worker, but as a trainee getting stipend, based on 50 per cent of the wages of the skilled workers of the grade engaged in the trade occupation concerned for the first year and also for the second year, rate is 60 per cent in similar manner as stated above. They are not allowed to join any trade union. An agreement is entered into by the apprentice and the undertakings. Director General, BMET (the competent authority under the ordinance) issues the certificate, after successful completion of the apprenticeship training. The BMET is implementing the apprentice training programme, as defined in ordinance through its regional Directorates.

There are only about 200 apprentices undergoing training now. This is a discouraging figure. The main reason behind the situation is that present ordinance has a limited coverage of undertakings and its trade area. The NCSDT has, therefore, re-drafted the ordinance and the same has been accepted in principle in a meeting of the NCSDT held in May, 1990. The new ordinance would now require the vetting of the Ministry of Law before its promulgation.

The proposed ordinance has wide coverage of number of undertakings and occupational areas. The industrial establishment wherein fifty or more persons are employed and where five or more persons are employed in an apprenticeable trade will be considered as an undertaking for the purpose of introducing apprenticeship training program.

All apprenticeable undertakings are obligated to set aside a minimum 1 per cent of their wage bills for financing apprenticeship training. Income tax shall not be payable by an undertaking, in respect of any expenditure incurred by them in the operation of the training programme in accordance with the provisions of the ordinance and the rules.

## 4.5 Teacher Training

1. The Technical Teacher Training College (TTTC) located at Tejgaon Industrial Area, Dhaka is the first teachers training institution (for training of technical teachers) in the sub-continent (India-Pakistan-Bangladesh). TTTC was established in 1964 adjacent to the Dhaka Polytechnic Institute by constructing additional floors on the main building of the Institute of Glass and Ceramics. This location proved to be a great handicap for further expansion of both TTTC and Institute of Glass and Ceramics. The decision of Ministry of Education to give the ground floor to TTTC is yet to be implemented. TTTC offers one-year Diploma in Technical Education affiliated by the Bangladesh Technical Education Board and two-year B.Sc. in Technical Education affiliated by the University of Dhaka. In addition, TTTC runs many short courses sponsored by ODA, UNDP, CPSC and other organizations. The TTTC can train about 120 teachers annually in regular courses. TTTC, being an apex institution, has a great role to play in staff development for all

categories of teachers and administrators of the entire TVE system. In the course of time, TTTC will have to play a greater role by offering post graduate courses and acting as an intellectual arm of the Ministry of Education in the area of TVE.

2. Vocational Teachers Training College (VTTI) at Bogra was established in 1982 to train the teachers of Vocational Training Institutes (VTIs) in the country. The designed capacity of the Institute is 80 trainees per year. The Institute offers one year certificate course. Attempts are being made to introduce Diploma in Vocational Education. VTTI also offers short refresher courses to teachers and management courses to the administrators.

3. Both TTTC and VTTI are well equipped and well-staffed institutions developed with the help from international agencies. A proper linkage among TTTC, VTTI and BTEB may be established for providing leadership in the training of skilled manpower needed by the country.

# Part V

# ISSUES, PROBLEMS AND RECOMMENDATIONS

## 5.1 Employment Situation of Institutionally Trained Workers

A case study on employment problems in Bangladesh has been undertaken by the ILO, Dhaka. It reveals, that on certain considerations, recruitment of non-institutionally trained workers is mutually advantageous to employers and employees. Employers prefer informally trained workers because the latter can be hired at a cost lower than the trained TTC/VTI graduates. Moreover, a worker, who acquires skills through on the job practice, performs better than TTC/VTI graduates, who are yet to learn the practical skills in the real working situation. A training need survey, conducted by BMET/ILO in 1986 in 557 establishments belonging to various economic sectors, has revealed dominance of informally trained workers (or workers trained on the job) in the surveyed establishments. Out of 43,000 posts for trained workers, about 7,000 had received institutional training representing 16 per cent of the total, and out of the 7,000 trained workers, the number of those trained in TTC/VTI was only about 1200 (less than 3 per cent of the total skilled workers). In each establishment surveyed, 83.55 per cent of the skilled workers were found without formal training.

That means, no pre-employment training was considered necessary for those workers. The figures are for the 18 numbers of trades which are being offered either as formal or non formal trades. The figure shows a remarkable preponderance of un-trained workers over trained ones in the employment of skill labour market.

Further, it has been observed that the employment of disproprotionate number of unskilled workers by the public and private enterprises results in low quality products. It should, therefore, be possible by sustained efforts and better liaison to convince the employers that the employment of trained workers are more economical in the long run. The reason of dominance of untrained workers as reflected in the employment pattern revealed in the said survey deserves in-depth and serious study. Having limited scope for expansion of wage employment, the country must look for all avenues of employment creation, including self-employment. The reasons for limited scope of employment are mainly two-fold: firstly, the cost of creating wage employment is prohibitive and secondly, the availability of new job, in the formal sector is likely to be tiny fraction of the estimated requirements because of the narrow industrial base of the economy. (Bhuiya, March, 1993).

It is thus obvious that the labor market does not consider the VTI (also TTC) training appropriate for its needs. The most urgent task for the Bangladesh authorities and an essential part of their education planning for the 1990's must be a thorough discussion with labor market representatives about the Government's role in vocational education and training and the future size, objective and content of public vocational schools. In such discussions ministries of education, planning, manpower, industry, agriculture, transportation, etc., and employers' associations and major industries should participate. A quantitative and qualitative policy should be developed and projections up to the year 2000 should be made. The review should also include a school location planning considering such facts as the current location of many industrially biased VTIs in agricultural areas. (Mats Hultin, 1988)

## 5.2 Inadequacy of Training Programmes

According to the findings of Mafizur Rahman Committee, vocational/skill training facilities in Bangladesh are not well developed and the existing ones also suffer from internal and external inefficiencies due to:

1. Failure of institutions to achieve capacity target;
2. Mis-match of training with the demand in labour market;
3. Lack of contact and co-operation between industry and institutes;
4. Unpredictable nature of demand in labour market;
5. Existence of skill training institutions under different agencies having little co-ordination.
6. Urban-oriented curricula.

## 5.3 Recommendation by the Director-General of Technical Education (March 1993)

The Director-General of Technical Education prepared a working paper on the state of art of technical and vocational education in March 1993 for consideration of the Ministry of Education. The following major recommendations were made:

1. Establishing linkage of vocational education with general and madrasah (religious) education.
2. Increase of enrolment in the National Skill Standard III.
3. Starting double shift in selected trades/technologies in all trade and diploma level institutions.
4. Increase of facilities and provision of preference for female students.
5. Reorganization of training programmes for employment opportunities in foreign countries.
6. Modernizing the training programmes and introduction of training in new technologies.

7. Establishing new VTIs and Polytechnics in accordance with the needs of the country.
8. Establishing separate polytechnics for women.
9. Framing of new recruitment rules for skilled and semi-skilled workers.
10. Expansion of TVE by including new technologies in a planned way.
11. Establishing a research organization for applied research in TVE. Initially, a linkage may be established among Technical Teacher Training College (TTTC), Vocational Teacher Training College (VTTI) and Bangladesh Technical Education Board (BTEB).
12. Strengthening the National Council for Skill Development and Training (NCSDT) and making the BTEB as the Secretariat of NCSDT.

The following recommendations were adopted in the concluding session of a symposium on 'Vocational Education and Training in Bangladesh' held in September 1989.

1. Selection and number of trades at VTIs/TTCs be reviewed and updated on the basis of actual requirements in the labour market which shall necessitate periodical revision of the syllabi allowing for local adaptation.
2. Effective linkages between VTIs/TTCs and the employers/industries be established; local advisory committees be constituted to advise on course contents, promote employment opportunities and industrial attachments, popularize vocational training amongst industries to encourage the latter to produce quality products by engaging well trained manpower.
3. Efforts be made to recruit teachers with industrial experience and to arrange specially designed skill upgrading programmes with provision for further training so as to improve the quality of the instructions given by the teachers.
4. Newly developed learning materials be introduced, properly implemented, continuously evaluated and the feed back be used for revision of syllabus and further development of learning materials.
5. Prototypes, models and drawings for manufacturing e.g. school furniture, should be developed allowing for income generating production and sale of products with the income re-cycled for the development of production activities.
6. Effective measures be taken for ensuring self employment of the graduates providing e.g. soft term credit facilities.
7. Non-formal courses be encouraged in VITs to enable craftsmen in service and others without previous training to upgrade their individual skill.
8. Differences in the stipends, pay scales and other benefits including vacation currently experienced by VIT/TTC students, teachers and administrative staff be removed.

9. A national comprehensive survey be made to investigate the employment opportunities for VTI/TTC male and female graduates.
10. Special arrangements for accommodation, transport etc. to meet women's needs be provided to actively promote their participation in technical vocational training.
11. VTTI facilities in addition to its present programme be used for training of teachers from TTCs, Polytechnics, Industries and other institutions.
12. Efforts be made to initiate formulations of a mandatory legislation to secure employment of VTI/TTC graduates.
13. NCSDT be reactivated to take up the responsibilities entrusted to it in respect of vocational and technical education in Bangladesh and a research cell be set up for vocational training.
14. The training programme for the VTI staff(s) in maintenance and usage of VTI equipment at VTTI and Service Workshop, Narayanganj should continue as a regular part of the maintenance programme.
15. Industries be encouraged to send their unskilled and semi-skilled workers to VTIs for further skill development.

## 5.4 Recommendations by ILO

ILO (1992, pages 65-68) made a series of recommendations in respect of vocational training in Bangladesh. Some of the recommendations are:

1. A comprehensive Vocational Training Act should be promulgated covering all aspects of the vocational training system (institutional, on-the-job, inplant, apprenticeship, and non-institutional training and a mechanism for standard-setting, testing, and certification) in all sectors of economy. The Act should create a National Council for Skill Development and Training (NCSDT), tripartite in character, and a statutory board with full powers to organize, regulate, supervise, control, and develop the vocational training system. Simultaneously with the promulgation of the Act, the Technical Education Act, 1967, should be modified to remove anomalies. Other existing acts and ordinances should be amended to conform to the Vocational Training Act, particularly relating to skill standard-setting, testing, and certification.
2. The NCSDT should be reconstituted and revitalized as the national agency to coordinate skill development and training programmes. It should report to a high-level agency that will have the power and linkages to effectively co-ordinate the country's human resource development strategy. Its new responsibilities should emphasize the initiation of major policy reform relating to vocational training and its linkages with industry.

3. A single statutory governing agency should be established for all vocational and skill training in the country. It should have high-level legislative support and be properly staffed and financed to carry out its mandate. It should be known as the Vocational and Industrial Training Board (VITB) and be governed by the NCSDT.

4. Vocational and skill training should be assigned high priority in the overall programme of economic development. The organizations responsible for training institutions should be significantly strengthened and provided with legislative and procedural authority, as well as with staff and financial resources, to enable them to more effectively manage their operations.

5. A high-level National Advisory Committee, comprising industry leaders and chaired by a nationally-prominent industrialist, should be set up to provide advice to the Government on all aspects of vocational training.

6. An effective Labour Market Information System (LMIS) to provide data on national labour market trends and future labour market needs should be established. The Directorate of Training Planning of the NCSDT, with the assistance of the Employment Services Wing of the BMET and the BMPC (when revived), can establish the LMIS.

7. In order to obtain proper feedback on the labour market impact and relevancy and quality of training provided by training institutions, a system of continuing tracer surveys should be instituted to evaluate the experience of graduates who pass out from the TTCs and the VTIs.

8. The BMPC should be re-established to undertake manpower planning activities.

9. A policy decision should be taken to restructure the VTIs into two types of delivery systems, i.e. the urban model and rural model. The VTIs with a potential for considerable industrial employment and located in densely populated areas (the 4 bigger VTIs possibly) should be upgraded significantly to resemble the facilities of the TTCs. The rural-based VTIs should be restructured to become community-based agro-industrial skill centres to meet the needs of local employment, mostly agriculture.

10. A policy should be established to encourage further expansion of institutional training facilities at the trade level only when the economy registers a better rate of growth and to create a new VTC only after satisfying the following conditions: (a) there is a demand in the proposed VTC's areas of employability which cannot be met through the existing VTI/TTC; (b) there is a potential to fully enrol trainees who have expressed interest in occupational training that results in employment at wages currently paid within the community; and (c) the community actively supports establishment of the VTC.

11. A policy decision should be taken that vocational training should be centralized into larger capacity, more efficiently organized training centres with residential capacity, rather than small capacity VTIs in rural areas for training in industrial trades.

12. A Model Pilot TTC exclusively for women should be set up in Dhaka to demonstrate the applications and institutional modifications necessary to provide effective training services and employment for women.

13. A Skill Development Levy may be imposed on industries and other beneficiaries of skill development activities. The levy may be on the basis of a percentage of the total gross wages, or the total production costs, or the total sales volume of the enterprise. For the construction industry, the levy may be imposed on the total annual turnover.

14. A Skill Development Fund (SDF) should be created to support innovative schemes which do not require heavy initial investments in infrastructure, but which promote employment opportunities for the target groups. The Skill Development Levy would constitute part of the SDF. The Government's contribution to the fund may be a certain percentage of the national wage bill. The SDF may be administered by the proposed VITB, under the policy guidelines of the NCSDT.

15. A policy decision should be taken to encourage private training centres to grow and be creative. Legislation should be introduced requiring all private and NGO-sponsored centres to meet minimum standards for facilities, equipment, curricula, and personnel in order to offer instructional programmes. The NCSDT Secretariat should be authorized to establish and manage an accreditation programme for private and NGO-sponsored VITs.

16. Greater female participation should be promoted in vocational training through better physical facilities, training of trainers and administrators, modification of curricula to meet the needs of women, and improvements in the recruitment and job placement system. The social and cultural implications of women undertaking vocational trades training should be studied to evolve a long-term policy on vocational training for women.

17. Legislation should be enacted to guarantee a certain percentage of employment for TTC/VTI graduates to attract good students to vocational training. This may be the condition for sanctioning Government loans to industry. Credit facilities should be made available to TTC/VTI graduates to promote self-employment. A task force should be constituted to investigate and document the various options for improving employment opportunities for TTC/VTI graduates.

18. Training institutions should be authorized to undertake production work without sacrificing the quality of services provided to trainees. Production programmes should be carefully controlled and monitored. Financial rules and regulations should be modified to allow for the necessary cash flow to sustain the production programmes. Meaningful project work should be arranged. Prototypes, models, and drawings of viable products should be developed and manufactured.

19. An in-depth study of the potential of apprenticeship training schemes should be carried out. The incentive and administrative structures should be upgraded to create a more responsive and effective system.

20. A policy should be established requiring each school to conduct an occupational analysis study of the employability areas of the school to determine the specific skills needed by firms in that area.

21. More funds need to be allocated for proper maintenance of the buildings and equipment already established with large investments.

22. A policy should be formulated that vocational trainers must gain at least 2 years' industrial experience before or within the first 5 years of employment. To support this, the NCSDT should establish a summer attachment programme in industry for new instructors.

23. Staff salaries should be increased to compete with comparative positions in industry in order to attract and retain the right quality of instructors. Salary increases should be tied to the acquisition of industrial experience and the performance at staff development training institutes.

24. Trainee stipends should be increased to a point where trainees can be maintained in an acceptable study environment. Consideration should be given to providing a two or three step stipend as an incentive for achievements in training institutes/centre.

25. An effective system of institution monitoring and inspection should be set up.

## Annex 1

# DIFFERENT INSTITUTES UNDER THE DIRECTORATE OF TECHNICAL EDUCATION, A LINE DIRECTORATE OF THE MINISTRY OF EDUCATION

A. Degree Awarding Institutions

| SL. No. | Name of Institution | Courses offered | Intake capacity | Duration of courses |
|---|---|---|---|---|
| 1. | College of Textile Technology Tejgaon, Dhaka | Degree in Textile Technology | 50 | 4 years |
| 2. | College of Leather Technology Hazaribagh, Dhaka | Degree in Leather Technology | 30 | 4 years |
| 3. | Technical Teachers Training College Tejgaon, Dhaka | i) B Sc Tech Education<br>ii) Diploma in Tech Education<br>iii) Short Courses | 120 | 2 years<br>1 year |

B. Diploma Awarding Institutions

| SL. No. | Name of Institution | Courses offered | Intake capacity | Duration of courses |
|---|---|---|---|---|
| 1. | Polytechnic Institute Dhaka | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power<br>v) Chemical/Food Technology<br>vi) Electronics<br>vii) Architecture | 540 | 3 years |
| 2. | Polytechnic Institute Chittagong | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power<br>v) Electronics | 320 | 3 years |
| 3. | Polytechnic Institute Khulna | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power<br>v) Electronics | 240 | 3 years |

| SL. No. | Name of Institution | Courses offered | Intake capacity | Duration of courses |
|---|---|---|---|---|
| 4. | Polytechnic Institute Rajshahi | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power<br>v) Electronics | 200 | 3 years |
| 5. | Polytechnic Institute Mymensingh | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power | 240 | 3 Years |
| 6. | Polytechnic Institute Comilla | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power | 200 | 3 years |
| 7. | Polytechnic Institute Barisal | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power | 200 | 3 years |
| 8. | Polytechnic Institute, Bogra | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power | 200 | 3 years |
| 9. | Polytechnic Institute Rangpur | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power | 200 | 3 years |
| 10. | Polytechnic Institute Pabna | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power | 200 | 3 years |
| 11. | Polytechnic Institute Sylhet | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power | 200 | 3 years |
| 12. | Polytechnic Institute Feni | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power | 160 | 3 years |

| SL. No. | Name of Institution | Courses offered | Intake capacity | Duration of courses |
|---|---|---|---|---|
| 13. | Polytechnic Institute Kaptai | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power | 100 | 3 years |
| 14. | Polytechnic Institute Faridpur | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power | 160 | 3 years |
| 15. | Polytechnic Institute Jessore | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power | 160 | 3 years |
| 16. | Polytechnic Institute Kushtia | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power | 160 | 3 years |
| 17. | Polytechnic Institute Dinajpur | Diploma in Engg.<br>i) Civil<br>ii) Electrical<br>iii) Mechanical<br>iv) Power | 160 | 3 years |
| 18. | Mohila Polytechnic Institute Dhaka | Diploma in Engg.<br>i) Electronics<br>ii) Architecture | 80 | 3 years |
| 19. | Polytechnic Institute Tangail | Diploma in Engg.<br>i) Electrical<br>ii) Electronics | 80 | 3 years |
| 20. | Polytechnic Institute Patuakhali | Diploma in Engg.<br>i. Electrical<br>ii. Civil | 80 | 3 years |
| 21. | Graphic Arts Institute Dhaka | Diploma-in-Printing Technology<br>i) Specialised in Offset Printing<br>ii) Specialised in Graphic Reproduction | 50 | 3 years |
| 22. | Glass and Ceramic Institute Dhaka | Diploma-in-Ceramic Technology<br>Artisan Courses in Ceramics | 40<br>25 | 3 years<br>1 year |
| 23. | Bangladesh Survey Institute Comilla | Diploma-in-Survey Technology<br>Survey Final Certificate<br>Aminship Course | 20<br>30<br>40 | 3 years<br>2 years<br>1 year |
| 24. | Vocational Teachers Training Institute Bogra | Auto/Farm/ Elect/Radio/Refri/ Welding, Mech/Carp | 120 | 1 year |

C. Trade Certificate Awarding Institutions

| SL. No. | Name of Institution | Courses offered | Intake capacity | Duration of courses |
|---|---|---|---|---|
| 1. | Vocational Training Institute Barisal | Auto/Farm/ Elect/Radio/Drafting/ Welding, Mech/Carp/ | 200 | 2 years |
| 2. | Vocational Training Institute Pabna | Auto/Farm/ Elect/Radio/Drafting/ Welding, Mech/Carp/ | 200 | 2 years |
| 3. | Vocational Training Institute Rangpur | Auto/Farm/ Elect/Radio/Drafting/ Welding, Mech/Carp/ | 200 | 2 years |
| 4. | Vocational Training Institute Sylhet | Auto/Farm/ Elect/Radio/Drafting/ Welding, Mech/Carp/ | 200 | 2 years |
| 5. | Vocational Training Institute Narayanganj | Auto-Welding | 80 | 2 years |
| 6. | Vocational Training Institute Munshinganj | Refri-Welding | 40 | 2 years |
| 7. | Vocational Training Institute Manikganj | Refri-Welding | 40 | 2 years |
| 8. | Vocational Training Institute Tangail | Auto-Radio | 40 | 2 years |
| 9. | Vocational Training Institute Jamalpur | Farm-Mech | 60 | 2 years |
| 10. | Vocational Training Institute Netrokona | Farm-Elect | 40 | 2 years |
| 11. | Vocational Training Institute Kishoreganj | Farm-Mech | 40 | 2 years |
| 12. | Vocational Training Institute Rajbari | Farm-Elect | 40 | 2 years |
| 13. | Vocational Training Institute Madaripur | Farm-Elect | 40 | 2 years |
| 14. | Vocational Training Institute Gopalganj | Farm-Elect | 40 | 2 years |
| 15. | Vocational Training Institute Cox's Bazar | Auto-Radio | 40 | 2 years |
| 16. | Vocational Training Institute Maijdi | Auto-Mech | 40 | 2 years |
| 17. | Vocational Training Institute Chandpur | Auto-Refri | 40 | 2 years |
| 18. | Vocational Training Institute Brahmanbaria | Mech-Elect | 40 | 2 years |

| SL. No. | Name of Institution | Courses offered | Intake capacity | Duration of courses |
|---|---|---|---|---|
| 19. | Vocational Training Institute Habiganj | Farm-Welding | 40 | 2 years |
| 20. | Vocational Training Institute Moulvibazar | Auto-Mech | 40 | 2 years |
| 21. | Vocational Training Institute Sunamganj | Farm-Elect | 40 | 2 years |
| 22. | Vocational Training Institute Bhola | Auto-Elect | 40 | 2 years |
| 23. | Vocational Training Institute Patuakhali | Farm-Elect | 40 | 2 years |
| 24. | Vocational Training Institute Pirojpur | Auto-Elect | 40 | 2 years |
| 25. | Vocational Training Institute Bagerhat | Elect-Welding | 40 | 2 years |
| 26. | Vocational Training Institute Satkhira | Farm-Refri | 40 | 2 years |
| 27. | Vocational Training Institute Naril | Farm-Elect | 40 | 2 years |
| 28. | Vocational Training Institute Magura | Farm-Radio | 40 | 2 years |
| 29. | Vocational Training Institute Jhinaidah | Farm-Elect | 40 | 2 years |
| 30. | Vocational Training Institute Chuadanga | Farm-Welding | 40 | 2 years |
| 31. | Vocational Training Institute Meherpur | Farm-Elect | 40 | 2 years |
| 32. | Vocational Training Institute Natore | Auto-Radio | 40 | 2 years |
| 33. | Vocational Training Institute Nawabgonj | Farm-Elect | 40 | 2 years |
| 34. | Vocational Training Institute Naogaon | Farm-Mech | 40 | 2 years |
| 35. | Vocational Training Institute Sirajgang | Farm-Welding | 40 | 2 years |
| 36. | Vocational Training Institute Gaibandha | Farm-Mech | 40 | 2 years |
| 37. | Vocational Training Institute Kurigram | Farm-Elect | 40 | 2 years |
| 38. | Vocational Training Institute Thakurgaon | Farm-Refri | 40 | 2 years |
| 39. | Vocational Training Institute Nilphamari | Farm-Mech | 40 | 2 years |

| SL. No. | Name of Institution | Courses offered | Intake capacity | Duration of courses |
|---|---|---|---|---|
| 40. | Vocational Training Institute Khagrachari | Farm-Elect | 40 | 2 years |
| 41. | Vocational Training Institute Lalmonirhat | Farm-Mech | 40 | 2 years |
| 42. | Vocational Training Institute Joypurhat | Farm-Welding | 40 | 2 years |
| 43. | Vocational Training Institute Dewanganj | Farm-Mech | 40 | 2 years |
| 44. | Vocational Training Institute Gouripur | Farm-Mech | 40 | 2 years |
| 45. | Vocational Training Institute Bhairab | Farm-Mech | 40 | 2 Years |
| 46. | Vocational Training Institute Chatak | Farm-Welding | 40 | 2 years |
| 47. | Vocational Training Institute Banchharampur | Farm-Weaving | 40 | 2 years |
| 48. | Vocational Training Institute Begumganj | Farm-Elect | 40 | 2 years |
| 49. | Vocational Training Institute Joypara | Farm-Elect | 40 | 2 years |
| 50. | Vocational Training Institute Hosanabad | Elect-Welding | 40 | 2 years |
| 51. | Vocational Training Institute Parbatipur | Farm-Elect | 40 | 2 years |

Annex 2

## GRADUATES (TECHNICIANS) OF DIPLOMA IN ENGINEERING COURSES FROM 1958-1978

| Year / Technology | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Civil | 20 | 20 | 100 | 91 | 1 | 242 | 213 | 240 | 252 | 307 | 574 | 296 | 622 | 731 | 823 | 221 | 282 | 417 | 44 | 744 | 541 | 6781 |
| 2. Electrical | 23 | 11 | 30 | 16 | - | 44 | 38 | 46 | 72 | 38 | 87 | 77 | 340 | 275 | 283 | 62 | 66 | 84 | 72 | 116 | 127 | 1907 |
| 3. Mechanical | 20 | 7 | 16 | 16 | - | 64 | 51 | 77 | 88 | 71 | 195 | 164 | 642 | 490 | 609 | 107 | 172 | 227 | 103 | 219 | 151 | 3489 |
| 4. Power | 15 | 19 | 30 | 30 | - | 61 | 53 | 106 | 100 | 60 | 376 | 150 | 577 | 332 | 442 | 30 | 102 | 127 | 143 | 223 | 143 | 3119 |
| 5. Electronics | - | - | - | - | - | 14 | 13 | 5 | 7 | 14 | 39 | 21 | 63 | - | - | 29 | 29 | 19 | 20 | 15 | 17 | 305 |
| 6. Chemical | - | - | - | - | - | - | - | 13 | 7 | 9 | 19 | 8 | 22 | 7 | 10 | - | 13 | 6 | 6 | 22 | 4 | 146 |
| 7. Chemical (Food) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 8. Automobile | - | - | - | - | - | - | - | - | - | - | - | - | - | 14 | 13 | 1 | 2 | - | 8 | 18 | 16 | 72 |
| 9. Industrial Wood | - | - | - | - | - | - | - | - | - | - | - | - | - | 13 | 9 | 2 | - | - | 2 | 2 | 11 | 49 |
| 10. Architecture | - | - | - | - | - | - | - | - | - | 9 | 10 | 7 | 10 | 1 | 3 | 2 | 2 | - | 1 | 2 | 8 | 55 |
| 11. Power (Farm) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 8 | 15 | 9 | 9 | 41 |
| Total | 78 | 57 | 176 | 153 | 1 | 425 | 368 | 487 | 526 | 508 | 1300 | 723 | 2276 | 1863 | 2202 | 454 | 668 | 888 | 414 | 1370 | 1027 | 15964 |

## Graduates (Technicians) of Diploma in Engineering Courses from 1979 to 1988

| Year / Technology | 1979 | | 1980 | | 1981 | | 1982 | | 1983 | | 1984 | | 1985 | | 1986 | | 1987 | | 1988 | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass |
| 1. Civil | 1255 | 963 | 1624 | 1326 | 1402 | 1030 | 1463 | 991 | 1394 | 763 | 1218 | 651 | 998 | 550 | 1488 | 618 | 1969 | 842 | 1877 | 705 | 14688 | 8439 |
| 2. Electrical | 355 | 126 | 755 | 421 | 857 | 623 | 917 | 620 | 738 | 440 | 706 | 220 | 699 | 238 | 984 | 515 | 1141 | 310 | 1131 | 487 | 8463 | 4000 |
| 3. Mechanical | 497 | 245 | 976 | 593 | 1000 | 585 | 1058 | 691 | 814 | 372 | 648 | 385 | 433 | 171 | 836 | 235 | 1171 | 382 | 1231 | 429 | 8664 | 4088 |
| 4. Power | 432 | 240 | 583 | 219 | 720 | 420 | 706 | 439 | 418 | 219 | 253 | 99 | 196 | 77 | 503 | 144 | 853 | 267 | 920 | 325 | 5584 | 2449 |
| 5. Electronics | 58 | 37 | 94 | 68 | 110 | 78 | 70 | 63 | 93 | 61 | 92 | 64 | 79 | 55 | 79 | 54 | 121 | 42 | 133 | 75 | 929 | 597 |
| 6. Chemical | 29 | 15 | 48 | 30 | 36 | 27 | 51 | 33 | 19 | 13 | 7 | 7 | 4 | 4 | 22 | 18 | 38 | 24 | 33 | 19 | 287 | 190 |
| 7. Chemical (Food) | - | - | - | - | 9 | 6 | 8 | 4 | 8 | 5 | 3 | 2 | - | - | 3 | 3 | 13 | 10 | 6 | 5 | 50 | 35 |
| 8. Automobile | - | - | - | - | - | - | - | - | - | - | 20 | 8 | 16 | 6 | 26 | 11 | 33 | 16 | 34 | 11 | 129 | 52 |
| 9. Industrial | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 12 | 5 | 9 | 7 | 21 | 12 |
| 10. Architecture | 31 | 16 | 22 | 15 | 37 | 24 | 27 | 18 | 34 | 16 | 9 | 2 | 2 | 2 | 39 | 19 | 44 | 19 | 39 | 12 | 284 | 143 |
| 11. Power (Farm) | 40 | 29 | 59 | 33 | 18 | 16 | 9 | 7 | - | - | - | - | - | - | - | - | - | - | - | - | 126 | 85 |
| 12. Civil (Arch) | - | - | - | - | 4 | 2 | - | - | 23 | 17 | 24 | 1 | - | - | 10 | 5 | 19 | 9 | 18 | 7 | 98 | 41 |
| Total | 2697 | 1671 | 4161 | 2705 | 4193 | 2811 | 4309 | 2866 | 3541 | 1906 | 2980 | 1439 | 2427 | 1103 | 3990 | 1622 | 5414 | 1926 | 5611 | 2082 | 39323 | 20131 |

## Graduates (Technicians) of Diploma in Engineering Courses from 1989 to 1991 and Grand Total

| Year / Technology | 1989 | | 1990 | | 1991 | | Total | | Grand Total of Graduates (from 1958 to 1991) |
|---|---|---|---|---|---|---|---|---|---|
| | App | Pass | App | Pass | App | Pass | App | Pass | Pass |
| 1. Civil | 805 | 479 | 530 | 340 | 599 | 321 | 1934 | 1140 | 16360 |
| 2. Mechanical | 490 | 307 | 363 | 189 | 353 | 176 | 1206 | 672 | 8249 |
| 3. Electrical | 554 | 331 | 363 | 210 | 378 | 238 | 1295 | 779 | 6686 |
| 4. Power | 422 | 273 | 288 | 191 | 252 | 186 | 962 | 650 | 6218 |
| 5. Electronics | 61 | 47 | 57 +42 | 45 +33 | 70 | 61 | 188 +42 | 153 +33 | 1088 |
| 6. Architecture | 13 | 10 | 20 + 34 | 10 +21 | 19 | 9 | 52 +34 | 29 +21 | 248 |
| 7. Automobile | 21 | 15 | 9 | 4 | 13 | 11 | 43 | 30 | 154 |
| 8. Industrial Wood | 8 | 6 | 7 | 6 | 4 | 3 | 19 | 15 | 76 |
| 9. Chemical | 24 | 15 | 16 | 14 | 27 | 22 | 67 | 51 | 387 |
| 10. Chemical (Food) | 4 | 4 | 2 | 1 | 2 | 2 | 8 | 7 | 42 |
| 11. Civil (Architecture) | | | | | | | | | 126 |
| 12. Power | | | | | | | | | 41 |
| Total | 2402 | 1487 | 1731 | 1064 | 1717 | 1029 | 5850 | 3580 | 3967 |

# Graduates (Craftsmen) of Trade Courses from 1969 to 1985

| Trade \ Year | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Automotive | 31 | 46 | 124 | 20 | 5 | 52 | 26 | 17 | 61 | 103 | 151 | 177 | 254 | 258 | 221 | 168 | 7 | 1721 |
| 2. Carpentry | 18 | 77 | 76 | - | 3 | 11 | 17 | 14 | 13 | 11 | 18 | 23 | 28 | 24 | 87 | 45 | 3 | 468 |
| 3. Civil Construction (Masonry) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 |
| 4. Drafting (Civil) | - | - | 32 | 9 | - | 13 | 5 | 4 | 8 | - | 55 | - | 104 | 46 | 74 | 65 | 13 | 428 |
| 5. Drafting (Mech) | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | 8 | 5 | - | 14 |
| 6. Electrical | 53 | 65 | 128 | 18 | 13 | 59 | 21 | 21 | 31 | 45 | 153 | 199 | 285 | 325 | 320 | 289 | 55 | 2080 |
| 7. Farm Machinery | 59 | 98 | 145 | 26 | 29 | 62 | 63 | 41 | 65 | 89 | 161 | 203 | 291 | 278 | 279 | 275 | 4 | 2168 |
| 8. Foundry | 20 | 12 | 13 | - | 4 | 6 | 3 | - | 3 | 4 | 5 | 6 | 2 | 5 | 1 | 8 | - | 92 |
| 9. General Mechanics | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10. Machinist | 30 | 38 | 178 | 12 | 19 | 65 | 23 | 29 | 43 | 20 | 101 | 120 | 180 | 169 | 151 | 183 | 19 | 1380 |
| 11. Plumbing & Pipe Fitting | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 12. Radio and TV | 5 | 9 | 13 | 6 | - | 6 | 3 | 3 | 5 | 13 | 1 | 5 | 2 | 3 | 5 | 21 | 3 | 102 |
| 13. Refrigeration | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 14. Turner | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 15. Welding | 7 | 19 | 57 | 5 | 1 | 5 | 10 | 10 | 11 | 22 | 19 | 106 | 134 | 85 | 131 | 189 | 3 | 814 |

## Graduates (Craftsmen) of National Skill Standard III
## Trade Course Part 1 from 1985 to 1992

| Trade \ Year | 1985 | | 1986 | | 1987 | | 1988 | | 1989 | | 1990 | | 1991 | | 1992 | | Grand Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass |
| 1. Automotive | 360 | 253 | 350 | 239 | 509 | 351 | 444 | 344 | 439 | 299 | 575 | 34 | 376 | 266 | 453 | 148 | 3506 | 1934 |
| 2. Carpentry | 81 | 77 | 57 | 54 | 77 | 39 | 53 | 30 | 52 | 44 | - | - | 27 | 15 | 19 | 16 | 366 | 275 |
| 3. Civil Construction (Masonry) | 71 | 31 | 46 | 36 | 52 | 8 | 48 | 33 | 25 | 16 | - | - | 15 | 13 | 11 | 10 | 268 | 147 |
| 4. Drafting (Civil) | 164 | 129 | 159 | 96 | 156 | 87 | 152 | 86 | 144 | 103 | - | - | 128 | 115 | 96 | 63 | 999 | 679 |
| 5. Drafting (Mech) | 47 | 27 | 47 | 41 | 69 | 59 | 33 | 29 | 27 | 21 | - | - | 37 | 33 | 12 | 11 | 272 | 221 |
| 6. Electrical | 492 | 340 | 486 | 250 | 781 | 467 | 798 | 503 | 776 | 382 | 982 | 64 | 632 | 483 | 691 | 457 | 5638 | 2946 |
| 7. Farm Machinery | 402 | 271 | 435 | 262 | 539 | 252 | 558 | 216 | 595 | 312 | 668 | 61 | 353 | 134 | 494 | 215 | 4044 | 1723 |
| 8. Foundry | 10 | 2 | 11 | 9 | 13 | 4 | 3 | 00 | - | - | - | - | - | - | - | - | 37 | 15 |
| 9. General Mechanics | 148 | 123 | 127 | 102 | 196 | 150 | 174 | 109 | 158 | 94 | - | - | 96 | 47 | 115 | 78 | 1014 | 703 |
| 10. Machinist | 229 | 186 | 204 | 157 | 251 | 125 | 298 | 170 | 259 | 173 | 357 | 26 | 221 | 125 | 265 | 102 | 2084 | 1064 |
| 11. Plumbing & Pipe Fitting | - | - | - | - | 20 | 18 | 29 | 19 | 19 | 12 | - | - | 21 | 12 | 43 | 23 | 132 | 84 |
| 12. Radio and TV | 55 | 20 | 62 | 42 | 159 | 55 | 251 | 189 | 238 | 119 | 283 | 7 | 162 | 126 | 206 | 129 | 1416 | 687 |
| 13. Refrigeration | 44 | 41 | 36 | 20 | 77 | 47 | 84 | 49 | 132 | 109 | 177 | 19 | 127 | 76 | 144 | 67 | 821 | 428 |
| 14. Turner | 71 | 56 | 78 | 67 | 90 | 41 | 100 | 51 | 69 | 38 | - | - | 47 | 29 | 32 | 30 | 487 | 312 |
| 15. Welding | 261 | 153 | 247 | 208 | 285 | 135 | 252 | 130 | 255 | 117 | 270 | 11 | 145 | 81 | 210 | 97 | 1925 | 932 |
| Total | 2435 | 1709 | 2345 | 1583 | 3274 | 1838 | 3277 | 1958 | 3188 | 1839 | 3312 | 222 | 2387 | 1555 | 2791 | 1446 | 23009 | 12150 |

# Graduates (Craftsmen) of National Skill Standard II
# Trade Courses Part 2 from 1985 to 1992

| Trade / Year | 1986 | | 1987 | | 1988 | | 1989 | | 1990 | | 1991 | | 1992 | | Grand Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass | App | Pass |
| 1. Automotive | 370 | 164 | 303 | 224 | 278 | 223 | 279 | 202 | 234 | 13 | 188 | 95 | 280 | 184 | 1932 | 1105 |
| 2. Carpentry | 77 | 57 | 53 | 40 | 36 | 27 | 21 | 16 | - | - | 19 | 18 | 20 | 18 | 226 | 176 |
| 3. Civil Construction (Masonry) | 67 | 51 | 48 | 39 | 18 | 14 | 13 | 9 | - | - | 3 | 3 | 12 | 12 | 161 | 128 |
| 4. Drafting (Civil) | 142 | 110 | 129 | 43 | 140 | 84 | 117 | 89 | - | - | 80 | 61 | 112 | 65 | 720 | 452 |
| 5. Drafting (Mech) | 62 | 44 | 45 | 32 | 47 | 40 | 20 | 17 | - | - | 12 | 11 | 24 | 23 | 210 | 167 |
| 6. Electrical | 504 | 261 | 488 | 316 | 467 | 359 | 485 | 259 | 484 | 13 | 320 | 234 | 452 | 249 | 3200 | 1691 |
| 7. Farm Machinery | 379 | 161 | 343 | 234 | 317 | 222 | 307 | 164 | 335 | 48 | 192 | 101 | 241 | 153 | 2114 | 1083 |
| 8. Foundry | 1 | 00 | 2 | 2 | 2 | 1 | - | - | - | - | - | - | - | - | 5 | 3 |
| 9. General Mechanics | 171 | 127 | 126 | 106 | 88 | 69 | 88 | 53 | - | - | 64 | 41 | 65 | 49 | 602 | 445 |
| 10. Machinist | 186 | 122 | 147 | 78 | 292 | 162 | 180 | 109 | 149 | 8 | 110 | 85 | 100 | 57 | 1164 | 621 |
| 11. Plumbing & Pipe Fitting | 23 | 23 | 18 | 14 | 15 | 14 | 18 | 10 | - | - | 3 | 3 | 18 | 6 | 95 | 70 |
| 12. Radio and TV | 88 | 67 | 74 | 67 | 79 | 62 | 119 | 83 | 158 | 5 | 100 | 67 | 125 | 78 | 743 | 429 |
| 13. Refrigeration and Air Conditioning | 54 | 45 | 46 | 36 | 33 | 28 | 53 | 48 | - | - | 80 | 62 | 87 | 50 | 353 | 269 |
| 14. Turner | 64 | 40 | 41 | 33 | 49 | 36 | 47 | 27 | - | - | 23 | 10 | 28 | 23 | 252 | 169 |
| 15. Welding | 178 | 108 | 119 | 90 | 140 | 80 | 115 | 40 | 164 | 6 | 53 | 25 | 102 | 66 | 871 | 415 |
| Total | 2366 | 1380 | 1982 | 1354 | 2001 | 1421 | 1862 | 1126 | 1524 | 93 | 1247 | 816 | 1666 | 1033 | 12648 | 7223 |

Other Graduates (technician level of varying duration)

* Diploma Printing Technology

| Year | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Graphic Reproduction | - | 4 | 5 | - | 8 | 6 | 7 | 11 | 3 | 8 | 6 | 14 | 15 | 16 | 14 | 17 | 16 | 17 | 16 | 183 |
| Offset Printing | 5 | 9 | 11 | 4 | 13 | 10 | 9 | 10 | 8 | 3 | 6 | 9 | - | - | - | 14 | 15 | 11 | 16 | 154 |

* Diploma Survey Technology

| Year | 1987 | 1988 | 1989 | 1990 | 1991 | Total |
|---|---|---|---|---|---|---|
| Graduates | 33 | 27 | 31 | 29 | 22 | 142 |

* Diploma Marine Engineering

| Year | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Graduates | 18 | 27 | 24 | 33 | 23 | 18 | 1 | 24 | 22 | 26 | 216 |

* Diploma Ceramics Technology

| Year | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | Total |
|---|---|---|---|---|---|---|---|---|
| Graduates | 6 | 7 | - | 21 | 12 | 6 | 10 | 62 |

* Diploma Forestry

| Year | 1987 | 1988 | 1989 | Total |
|---|---|---|---|---|
| Graduates | 74 | 92 | 87 | 253 |

* Diploma Agriculture

| Year | 1992 | Total |
|---|---|---|
| Graduates | 191 | 191 |

* Diploma Commerce

| Year | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Accounting Group (Bangla) | 26 | 66 | 99 | 224 | 301 | 145 | 87 | 139 | 35 | 92 | 49 | 158 | 165 | 222 | 210 | 171 | | | | | | | | | 2189 |
| 2. Secretarial Science Group (Bangla) | 50 | 146 | 244 | 481 | 173 | 216 | 205 | 94 | 190 | 221 | 138 | 302 | 200 | 194 | 93 | 99 | | | | | | | | | 3046 |
| 3. Accounting Group (English) | | | | | | | | | 104 | 91 | 75 | 223 | 270 | 297 | 249 | 214 | 6 | 8 | 31 | 23 | 40 | 28 | 45 | 43 | 1767 |
| 4. Secretarial Science Group (English) | | | | | | | | 211 | 93 | 107 | 140 | 341 | 361 | 430 | 298 | 258 | 14 | 10 | 16 | 19 | 28 | 15 | 22 | 17 | 2364 |

* Sub Overseer Certificate

| Year | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Graduates | 19 | 20 | 50 | 233 | 58 | 35 | 26 | 30 | 74 | 72 | 72 | 164 | 185 | 246 | 213 | 189 | 198 | 193 | 191 | - | 113 | 66 | 29 | 14 | 2490 |

* Certificate Secretarial Science

| Year | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CSS (Bangla) | 32 | 81 | 17 | 105 | 47 | 51 | 21 | 11 | 11 | 6 | 11 | 6 | 26 | 25 | 23 | 44 | 59 | 50 | 7 | 9 | 642 |
| CSS (English) | - | - | 14 | 91 | 106 | 111 | 128 | 94 | 79 | 82 | 50 | 86 | 58 | 41 | 30 | 50 | 76 | 52 | 22 | 23 | 1193 |

* Training Business Typing

| Year | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | | 1986 | | | 1987 | 1989 | 1990 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | 1st batch | 2nd batch | 1st batch | 2nd batch | | | | | |
| TBT (Bangla) | | | | | | | | | 232 | 345 | | 401 | 391 | 395 | - | - | 468 | 726 | 2958 |
| TBT (English) | 5 | 14 | | 8 | 6 | 14 | 8 | 2 | 325 | 409 | | 444 | 424 | 441 | | | 451 | 668 | 3219 |
| TBT (Arabic) | | | | | | | | | 58 | 51 | | 54 | 45 | 37 | | | 47 | 36 | 328 |

* Aminship Certificate

| Year | 1987 | 1988 | 1989 | 1990 | 1991 | Total |
|---|---|---|---|---|---|---|
| | 34 | 89 | 49 | 73 | 37 | 282 |

* Survey Final Certificate

| Year | 1987 | 1988 | 1989 | 1990 | 1991 | Total |
|---|---|---|---|---|---|---|
| | 38 | 28 | 69 | 44 | 64 | 243 |

* Certificate Textile

| Year | 1990 | Total |
|---|---|---|
| | 29 | 29 |

* Textile Artisan

| Year | 1991 | Total |
|---|---|---|
| | 44 | 44 |

* Vocational Teachers Training Certificate (1 year post-certificate)

| Year | 1989 | 1990 | Total |
|---|---|---|---|
| 1. Auto Diesel | 6 | 8 | 14 |
| 2. Electrical | 6 | 7 | 13 |
| 3. Machinist | 6 | 3 | 9 |
| 4. Welding | 5 | 5 | 10 |
| 5. Farm Machinery | 7 | 12 | 19 |
| 6. Wood working | 4 | - | 4 |
| 7. Radio & TV | - | 4 | 4 |

* Diploma Technical Education (1 year post-diploma in Engineering)

| Year | 1987 | 1988 | 1989 | 1990 | 1991 | Total |
|---|---|---|---|---|---|---|
| 1. Civil | 5 | | 10 | 10 | 8 | 33 |
| 2. Mechanical | 5 | | 10 | 14 | 7 | 36 |
| 3. Electrical | 5 | | 10 | 14 | 8 | 37 |
| 4. Power | 3 | | 9 | 10 | 4 | 4 |

## Annex 3

# DIFFERENT INSTITUTES UNDER BUREAU OF MANPOWER, EMPLOYMENT AND TRAINING

Trade Certificate Awarding Institutions
(BIMT offers diploma level course also)

| S.L. No. | Name of Institution | Courses Offered | Intake Capacity | Duration of Courses |
|---|---|---|---|---|
| 1 | Bangladesh Institute of Marine Technology, Narayangang | Diploma level course in Marine Engineering (3 years duration), Marine-Diesel Artificer (2 years duration), Ship Building Welding, Ship Building and Mechanical Drafting, Ship Right/Plater course, Diesel Operator course, Steam and Gas Turbine | 355 | varying duration |
| 2 | Technical Training Centre, Mirpur, Dhaka | Mechanical Drafting, Civil Drafting, Radio/TV, Refrigeration and Air Conditioning, Electrical, Automotive, General Mechanics, Carpentry, Welding, Machinist, Turner, Building Construction (Masonry) | 425 | 2 years |
| 3 | Bangladesh German Technical Training Centre, Mirpur, Dhaka | Mechanical Drafting, Civil Drafting, Radio/TV, Refrigeration and Air Conditioning, Electrical, Automotive, General Mechanics, Welding, Machinist, Turner, Building Construction (Masonry), Plumbing and Pipe Fitting | 385 | 2 years |

| S.L. No. | Name of Institution | Courses Offered | Intake Capacity | Duration of Courses |
|---|---|---|---|---|
| 4 | Technical Training Centre, Chittagong | Mechanical Drafting, Civil Drafting, Radio/TV, Refrigeration and Air Conditioning, Electrical, Automotive, General Mechanics, Welding, Machinist, Turner, Building Construction (Masonry), Plumbing and Pipe Fitting | 350 | 2 years |
| 5 | Technical Training Centre, Rajshahi | Mechanical Drafting, Civil Drafting, Electrical, Automotive, General Mechanics, Carpentry, Welding, Machinist, Turner, Building Construction (Masonry), Plumbing & Pipe Fitting, [Dressmaking, Typing - 6 monthly] | 280 | 2 years |
| 6 | Technical Training Centre, Khulna | Mechanical Drafting, Civil Drafting, Radio/TV, Electrical, Automotive, General Mechanics, Carpentry, Welding, Machinist, Turner, Building Construction (Masonry), Plumbing and Pipe Fitting | 250 | 2 years |
| 7 | Technical Training Centre, Bogra | Electrical, Automotive, General Mechanics, Carpentry, Building Construction (Masonry), Plumbing & Pipe Fitting | 150 | 2 years |
| 8 | Technical Training Centre, Faridpur | Civil Drafting, Electrical, Automotive, General Mechanics, Carpentry, Welding, Turner, Building Construction (Masonry) | 165 | 2 years |

| S.L. No. | Name of Institution | Courses Offered | Intake Capacity | Duration of Courses |
|---|---|---|---|---|
| 9 | Technical Training Centre, Rangamati | Electrical, Automotive, General Mechanics, Carpentry, Welding, Building Construction (Masonry), [Dressmaking, Typing - 6 monthly] | 170 | 2 years |
| 10 | Technical Training Centre, Barisal | Electrical, Automotive, General Mechanics, Carpentry, Building Construction (Masonry), Plumbing & Pipe Fitting | 135 | 2 years |
| 11 | Technical Training Centre, Mymensingh | Electrical, Automotive, General Mechanics, Carpentry, Building Construction (Masonry), Plumbing & Pipe Fitting | 150 | 2 years |
| 12 | Technical Training Centre, Comilla | Radio/TV, Electrical, Automotive, General Mechanics, Carpentry, Building Construction (Masonry), Plumbing & Pipe Fitting | 225 | 2 years |

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