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ABSTRACT

ANALYSES OF VOCATIONAL-TECHNICAL EDUCATION IN  
BANGLADESH FOR THE DEVELOPMENT OF AN  
ALTERNATIVE SYSTEM

by

Abul B. M. Bahauddin

The purpose of this study was to investigate the current situation of vocational-technical education at the secondary level in Bangladesh in order to develop an alternative system of vocational-technical education to overcome the existing shortcomings.

Method

Analyses of the study were based on a systematic review and synthesis of conditions and recommendations published in various documents. The criteria for selecting material were related to publications and authors. The selection of publications was based on two criteria: official publications from the then government of Pakistan and East Pakistan (Bangladesh), and official publications of agencies and organizations which conducted studies and projects in Pakistan and/or Bangladesh. The selection of authors was based on two criteria: associated with the government and/or associated with organization or agencies which have conducted studies or projects in Pakistan and/or Bangladesh.

Plans for an alternative system of vocational-technical education were based on the synthesis of recommendations from Government documents, authors associated with the Government.

international publications related to Bangladesh, and some principles which have been advocated by other recognized leaders in education.

### Findings and Interpretations

A serious and widening gap exists between the type of education required for gainful employment and the existing secondary education program. Educational leaders recognized vocational education should be an integral part of the purposes of secondary schools in Bangladesh. Educational programmes outside the school system such as, training facilities for adults and out-of-school youth were also lacking both in urban and rural areas of Bangladesh. In the urban on-the-job training, upgrading and apprenticeship programmes did not adequately develop in either the urban or rural areas. The systematic arrangements and facilities for farmers' training or other training programmes were not adequately available in Bangladesh. The economic benefit which might be expected from widespread basic knowledge and application of science and technology was not materialized in Bangladesh. The growing numbers of untrained labourers with a high rate of unemployment has made the situation in Bangladesh extremely alarming.

The existing agencies for vocational-technical education were not operating effectively as perceived by the leaders. The present divided administrative responsibility among several departments, had no common standard for the type and level of training, the lack of coordination and the duplication of facilities appeared to be the major source of impediments.

Statements in contemporary government document and by educational leaders emphasized a desire for a major shift from the dominant liberal art programmes to vocational-technical education

programmes in high schools. The major obstacles in achieving this objective, as found in the review were lack of qualified teachers, equipment, shop-laboratories and supplies. The proposed alternative system, therefore, emphasized merger of all the vocational-technical institutions into one at the thana level which is the lowest unit of the Government's direct administration. The proposed thana centres as envisaged would serve all the groups such as high school youth, out-of-school youth and adults which previously were served by the different departments. This combined and coordinated effort could be more effective and less expensive than helping each individual school. This approach might work as one of the best alternatives to solve the various problems in expanding vocational-technical education within the limited resources of Bangladesh. The system might well auger the maintenance of high standards, wider geographical coverage, greater opportunities for all engaged in education and training.

The basic programmes of the proposed thana schools included the following; secondary school programme, pre-vocational education, out-of-school youth programmes, adult programmes, work experience programmes, guidance and counseling programmes, coordination programmes, instructional development programmes, teacher education programmes, research and development programmes, curriculum for high school youth and adult programmes and administrative structure of the system.

These proposals were developed with a view to fulfilling the government's perspective plan in education as has been reflected in the various documents.

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Abul B. M. Bahauddin

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## DEDICATION

To cherish the loving memory of my father, Late Khan Sahib Syeduddin Ahmed, to whom I stand in debt for my education and knowledge; and whose last words beaoned me to the path of higher education.

and

To my mother Momtaz Mahal Begum whose enormous support was a source of strength in completing this humble work in order to fulfill my father's desire.

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But the greatest debt is the most difficult to express, which is the debt to my wife, Rita, who made my troubles her own, and through her kindness and understanding helped ease most of them; my gratitude for the good fortune of her patience during the innumerable hours I had to spend with research rather than with her. My loving appreciation goes to my daughter, Anita, who was born soon after my oral examination and could not get enough attention from her "busy dad"; to her, I say a most affectionate "thank you".

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Though the study has benefitted from the suggestions and comments of several scholars, colleagues, and friends, the responsibility of any errors or mistakes remains absolutely my own.

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## CHAPTER I

### INTRODUCTION

#### Statement of the Problem

The study was designed to investigate the current situation of vocational-technical education at the secondary level in Bangladesh in order to develop a feasible system of vocational-technical education to overcome the existing shortcomings.

#### Background of the Study

The current vocational-technical education in Bangladesh had its roots in the history of the sub-continent. Before 1947, under the British colonial rule, the kind of vocational education developed was meant to prepare the youth for government services in the clerical cadres. The curricula of the secondary education programmes contained considerable emphasis on literary subjects. The vocational education for preparing clerks was also limited to only a few individuals and not readily available throughout the country. The system of education did not include curricula to prepare students to enter other occupational areas such as agriculture, commerce and industry.

During the period of Pakistan since 1947, the system of education at the secondary level remained virtually the same as that inherited from Britain. There was very little emphasis on preparation of individuals to enter economically useful activities. In other words, the system was not designed to meet the needs and interests of adolescents to enter



a variety of careers which were necessary for national development. This resulted in a serious imbalance between educational output and societal needs. On the one hand, there was an excess of liberal arts graduates and on the other, there was a dearth of skilled manpower. This was also recognized in the proposals for a new education policy by the government of Pakistan;

After independence, although an expansion in educational facilities did take place, no changes in the basic structure of the education system were introduced. The result has been that our educational institutions have continued to produce white collared generalists who seek Government service. Naturally, enough employment opportunities in the Government service cannot expand at a rate higher than the overall growth rate of the national economy which itself has been kept in check by the non-availability of technically trained personnel because the educational system has not produced them. A colossal waste of national resources has obviously taken place and one of the reasons for it has been that we have failed to adapt our educational policies to the changed requirements of an independent nation (85:22).\*

However, on March 26, 1971, Bangladesh became a free and independent nation in the Indian sub-continent, fulfilling the aspiration of its people for a homeland to which so many had pledged and sacrificed their lives and their fortunes. The energy of millions of people were needed for the task of building a proud and prosperous nation. Education in Bangladesh was expected to play a vital role in developing the new nation.

There was also increasing realization in Bangladesh that the present educational system founded by colonial rule was not adequate to prepare youngsters and adults for the development of the country.

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\*85 indicates bibliography number and 22 is the page number of the same reference.

Change in the scope and programme of education was considered necessary to provide educational opportunities through which people could achieve the economic security and social well-being consistent with the goals of the nation.

Change is seldom easy to accomplish because change may threaten the pattern of life and work of many. Some of the forces that impede change include lack of funds, gaps in knowledge and outmoded administrative patterns. However, the forces which hinder change in vocational education may be partially overcome as the leaders in this field are able to redesign programmes of vocational education to more effectively serve society. This study was an attempt to examine the existing situation of vocational education at the secondary level of Bangladesh in order to develop a system to serve the educational needs of this new nation.

#### Objectives of the Study

The objectives of the study were as follows:

1. To examine the current situation of vocational-technical education at the secondary level in Bangladesh with respect to:
  - a. recent policies on education and manpower,
  - b. secondary education and its curricular offerings,
  - c. opportunities for vocational education for youth and adults,
  - d. administrative structure of vocational-technical education,
  - e. teacher supply for vocational-technical education,

- f. availability of physical facilities including laboratories and requisite equipment.
  - g. student enrollment in vocational-technical education programmes, and
2. To develop an alternative system of vocational-technical education for Bangladesh to overcome the existing shortcomings.

### Basic Hypothesis

The basic hypothesis of this study was as follows:

The present system of vocational-technical education at the secondary level in Bangladesh is not serving the ultimate goals of producing trained manpower for overall development of the country as effectively as formal and informal leaders believe it should.

### Assumptions

The following assumptions were made as a basis for conducting the study:

1. That a theoretical model of vocational and technical education at the secondary level in Bangladesh can be developed by synthesizing recommendations from relevant literature and educational data.
2. That appropriate vocational education for the people will help achieve national self-sufficiency and raise the level of living.
3. That vocational-technical education should be provided at the secondary level because that is the level at which large numbers of students enter the world of work.

4. That an alternative system may be a solution to the existing problems in the vocational-technical education programmes at the secondary level in Bangladesh.

5. That the outcomes of this study may provide a basis for improvement and promote further analysis on the subject.

### Methodology

Due to the recent war and abnormal situation in Bangladesh, it was not possible to collect primary data. The study was based on reliable secondary data. The researcher also used his personal observation and knowledge of the situation of vocational-technical education at the secondary level in Bangladesh.

Criteria for selecting material for review were as follows:

#### Publications:

1. Official publications from the Government of Pakistan and East Pakistan/Bangladesh; and
2. Official publications of agencies and organizations which conducted studies and projects in Pakistan and/or Bangladesh.

#### Authors:

1. Associated with the governments and/or,
2. Associated with organizations or agencies which have conducted studies or projects in Pakistan and/or Bangladesh.

The publications were reviewed to determine the findings and interpretations of findings reported by the various authors. These findings, interpretations and recommendations were then synthesized

in order to establish the central focus of weaknesses, strengths, and recommendations for change as reported by recognized government agencies and various experts.

In analyzing information related to the first objective, the current situation of vocational-technical education at the secondary level was examined in terms of: recent policies, secondary school curricula, availability of vocational programmes to youth and adults, administrative structure, teacher supply, physical facilities and student enrollment.

In analyzing information related to the second objective, an attempt was made to develop an alternative system of vocational-technical education on the basis of the synthesis of recommendations from government documents, authors associated with the government and some principles which have been advocated by recognized leaders in education. In developing the outline or framework of the proposed system, emphasis was given to (a) the various functions of the system, (b) administrative structure, and (c) curriculum which would enable the system to meet the needs of the nation.

Several key questions were used by the researcher to guide his review of the literature for the study:

1. To what extent do the government's recent plans and policies meet the educational needs?
2. How appropriate was the curriculum at the secondary level in fulfilling the needs of the nation as well as the needs of individual students?
3. To what extent were the vocational-technical programmes available to youth and adults who needed such training?

4. How appropriate was the administrative structure for vocational-technical education?
5. How adequate was the supply of trained teachers for vocational-technical education?
6. How adequate were the various kinds of physical facilities including laboratories and requisite equipment in the schools?
7. How adequate was the student enrollment in vocational-technical education at the secondary level?
8. Were the proposed alternative systems of vocational-technical education at the secondary level feasible for Bangladesh?

#### Limitations of the Study

The following limitations were acknowledged for the purpose of conducting this study:

1. The study covered both formal and nonformal education, but the formal education was limited to the secondary stage of high school level (i.e., matriculation and equivalent level in Bangladesh). Emphasis was placed on formal education.
2. Analyses were made by using selected secondary data which had been compiled by various agencies, institutions and individuals.
3. The study was confined to the institutions offering vocational-technical education open to the general public and did not include in-service training offered by other institutions under government and quasi-government organizations.

4. Publications produced during 1947-71 were used to analyze the situation of vocational-technical education. Most of these publications were not a direct product of the Bangladesh government.

#### Significance of the Study

Skilled and educated manpower is the hope of the present and promise of the future of Bangladesh. For a country like Bangladesh, with few minerals discovered and other natural resources, education becomes a very important tool of government to promote development. However, for the first time in recent history, Bangladesh has had the opportunity to use the resources of its country for its own development.

The problems of development are many and varied in Bangladesh. Resources are limited whereas problems seem unlimited. Very limited industrial development and low productivity in agriculture provide an insufficient base to feed the teeming population which is increasing at the rate of three percent per year. There are few skilled workers at all occupational levels in industry, agriculture and other fields. Yet, the future of Bangladesh probably lies with the people, the one resource which Bangladesh possesses in abundance. Hence, one of the greatest assets of Bangladesh is manpower; but this asset can only become the indicator of national wealth if its energies can be released through a combination of appropriate skills and training accompanied by appropriate government policies. Appropriate skills and knowledge on the part of the people would then be a great national asset instead of a burden and a constant snag to the economy of Bangladesh.

The implications of vocational-technical education for the development process of Bangladesh are very important. The key factors among many for economic development include capital, technology and a

skilled labour force. Among these three, capital can be borrowed and technology can be adopted to the special conditions of the country, but it is not feasible to loan the services of skilled labour for a country like Bangladesh where labour is abundant or super-abundant. It is desirable that the resident people be trained so that they can participate in the nation building works.

From the point of view of social development, education in a society should provide individuals with experiences whereby they can learn to live and to earn a living. Therefore, vocational education should be an integral part of the total education process.

In the nation building efforts of Bangladesh, the importance of education and right kind of education cannot be overlooked. It is necessary to consider this question and to develop the educational policy and programme suited to the talents of its people and with regard to the modern conditions and vast developments that have taken place all over the world.

For a balanced development between social infra-structure and production and physical infra-structure in Bangladesh, a high priority needs to be given to the role of vocational-technical education at the secondary level. This level in the educational ladder is universally recognized as a critical one. It is a terminal stage for a large number of students who then enter into the world of work. It is the level of education where character building and leadership must be developed. Secondary school students should be provided with the requisite skills and intellectual ability to cope with the various needs of the society.



Life in a democracy is characterized by the opportunity for individuals to make occupational, social, and intellectual choices. Citizens in a democratic society like Bangladesh should have the opportunity to prepare for any occupation they might choose and there should be training readily available. In addition, the vocational-technical education programmes should be of such size and scope as to meet the qualitative and quantitative needs of the nation for trained workers.

It is, therefore, considered important to take stock of performance to-date and deal with the basic weakness of the existing system of secondary education before going blindly ahead to compound them through further expansion. The country can ill afford a gross waste of economic and human resources.

In view of the above circumstances, it is, therefore, imperative to investigate the current situation of vocational-technical education at the secondary level in Bangladesh and to critically review the nature of the recommendations which have been made to improve the education.

#### Definition of Terms

For the purpose of this study some terms were defined and used as follows:

Technical and vocational education--(The definition adopted at the UNESCO international meeting of experts in 1962 was used.)  
 "technical and vocational education is taken to mean any form of

education relating to the practical, theoretical and general preparation of persons for specific callings in agriculture, industry and commerce." (53:3).

Technical training centres--institutions under the Directorate of Labour, Bangladesh at the secondary level which offer vocational and technical education courses to prepare people for employment at the level of skilled worker.

Vocational training institutes--institutions under the Directorate of Technical Education, Bangladesh at the secondary level which offer vocational-technical education courses to prepare people for employment at the level of skilled worker.

Pilot secondary schools--twenty-one experimental high schools under the Directorate of Public Instruction, Bangladesh; administered through Bangladesh Education Extension Centre, to demonstrate implementation of diversified vocational courses to other secondary schools of Bangladesh.

Multilateral high schools--high schools under the control of Directorate of Public Instructions, Bangladesh, designed to offer at least three or more courses out of diversified programmes of agriculture, commerce, industrial arts, home economics, advanced science and humanities, besides the compulsory subjects which are common in all high schools of Bangladesh.

Secondary high school or secondary school--any institution offering instruction from grade VI to grade X to prepare students for

matriculation or secondary school certificate examination conducted by the Boards of Intermediate and Secondary Education. Secondary school applies to all categories whether boys or girls, government or private, pilot or nonpilot, multilateral or bilateral school; used interchangeably.

Thana--original meaning, police station in Bangladesh. The smallest administrative unit of the government of Bangladesh. A thana has several unions, wards, and villages.

Union--a unit of local self-government made up of several wards. A ward consists of several small villages or sometimes a larger village may contain more than one ward. There are 4,053 unions, 40,000 (approximately) wards and 60,000 (approximately) villages in Bangladesh.

Thana training and development centres--training facilities at the thana headquarters established by the Department of Rural Works in the thana government; the programme is to train village leaders and other staff of different rural development projects.

Thana vocational-technical education programme--a comprehensive vocational-technical education programme in the geographical area of a thana through some selected thana vocational-technical centres.

Thana vocational-technical centres--"Thana vocational-technical centre" and "thana centres" are used interchangeably and refer to some specialized schools in a thana meant for implementing thana vocational-technical education.

Private industry--industry established and run by a management other than the government.

Qualified teacher--"qualified teacher" and "trained teacher" are used interchangeably and refers to teaching staff with a baccalaureate degree in the subject-matter of their teaching assignment and one academic year of pedagogic training from a recognized teacher preparation institution.

Crore--one crore is 1,00,00,000 equivalent to ten million (10,000,000).

### Overview of the Study

The first chapter has dealt with the introductory statements for conducting the study: the problem, background, objectives, methodology, assumptions, significance of the study and definition of terms used.

Chapter II contains a brief historical perspective for the development of schooling in Bangladesh including a brief history of the development of vocational education. This background information provides some insight to the social-philosophical foundation of education including vocational-technical education in Bangladesh.

In Chapter III, the manpower and educational need for Bangladesh as described in various publications was identified. These sources were used in describing the situation of vocational-technical education in Bangladesh.

Chapter IV contains information about the existing structure of vocational-technical education in Bangladesh and its major problems.

In Chapter V, plans for an alternative system of vocational-technical education for Bangladesh were developed. This alternative

system was based on the synthesis of recommendations from government's documents, studies, authors associated with the government and other recognized leaders in education.

Chapter VI contains a summary of the findings, conclusions, recommendations, and suggested directions for future research.

CHAPTER II

EVOLUTION OF SCHOOLING UNDER FOUR DIFFERENT  
CULTURAL AND POLITICAL PERIODS: A  
BRIEF SURVEY

Introduction

From time immemorial, there has been a conscious effort on the part of first, parent and later, others to prepare the children and youth to conquer their physical world. Long before conscious education through schools, children were taught to work by their parents. The craftsman's shop was in his home and vocational education was a matter of handing down from generation to generation the skills and knowledge necessary to each craft. Some individuals were also trained as warriors for using weapons to protect and expand the territories of the tribe or nation.

However, civilization evolved out of specialized knowledge and skills which were developed to satisfy basic needs and then those more subtle and refined needs. All sciences, arts and crafts, and industries grew by successive inventions, discoveries and refinement. Man can become fully human, only by building a civilization and it is through different skills and efficiency of work that he can build a civilization.

It has already been mentioned that vocational and technical education is an integral part of the total education of individuals. The development of education and schools in Bangladesh, includes the

development of vocational and technical education. So it becomes imperative to examine the history of the present day vocational education system in Bangladesh which has evolved under different political, social and economic conditions.

The People's Republic of Bangladesh is a new nation with the eighth largest population in the world. In population, it is somewhat smaller than Brazil, the seventh most populous nation and somewhat larger than West Germany. Although Bangladesh is a new state, it is not a new land. It was the seat of many ancient civilizations of the world. It is a country with a rich heritage of educational values. The existing educational status of Bangladesh has had four main periods of cultural and political impacts: the Hindu period, the Muslim period, the British period, and the Pakistan period.

#### The Hindu Period

During the ancient Hindu period the emphasis of education was on religious and mythological literatures. The system of education was essentially religious and personal in a sense that the pupil had to learn from his teacher by devoted service and living with him. The teacher taught the pupil how to pray, to offer sacrifice, and to perform his duties according to his state of life. The method of learning at home or in school was through memorizing subject matter (20).

During the Hindu period, education was confined to the "Brahmins" or priestly class. The Hindu society was self-divided into different vocational classes which gradually hardened into rigid castes, namely "Brahmins" (priests), "Kshatriyas" (nobles and warriors), "Vaisyas" (agriculturalists and traders), and the great mass of

population was classed as "sudras" (untouchables and lower class people). Each class carried on a particular occupation in the society. The occupation of the individual was determined by birth and the children were taught to work in the family: the daughters by the mothers and sons by the fathers. According to Keay; "Each experienced priest (Brahmin) probably taught his sons or nephews the ritual lore and hymns which were in the family by letting them repeat over and over again after him until all had been committed to memory, and probably each family guarded the secrecy of its own sacred tradition" (14:3).

Later on, three types of educational institutions gradually evolved which were known as, the "Parishads" (assemblies of elders), the "Tols" (Brahmin schools of Sanskrit learning) and the "Pathsalas" (elementary school). The first two institutions were almost exclusively for Brahmins or the priestly class. The third one, elementary schools, gave instruction in reading, writing and arithmetic which were open to all except the untouchables. As described by Sen,

The primary schools existed in all the large villages and usually consisted of a dozen to twenty pupils with a teacher, assembled under a tree or in temple, shed or other building set apart for the purpose. The teacher was an official of the community and either received rent-free lands or a share of the village harvest. His chief function was to offer worship to the village deity on behalf of the villagers, and his subsidiary function was to instruct the children of the three higher castes in the three R's and the precepts of the puranic legends" (21:17).

Just before the advent of the Muslim period, Buddhism emerged in India for a short period (629-645 A.D.) as a powerful religious movement fighting its way with Hinduism. Buddhism tried to break the Brahmin's monopoly in education but could not succeed. Shortly thereafter, Hinduism revived, and Buddhism eventually succumbed to virtual



death in its land of origin. Although Buddhists ruled for a short period of time, they left a deep impression on the thoughts and ideals of democracy and prepared the ground for social and educational change.

However, education in the Hindu period was not democratic. Because of the caste system, no individual in the lower class had an opportunity to make changes in his social, occupational, and intellectual life. Patterns of life were fixed. Under such a social condition, any development of a formal vocational education system was very difficult if not impossible.

#### The Muslim Period

The Muslims from central and Western Asia came to India as conquerors and settled down in the country and subsequently made it their home. However, the Muslim period started from the eleventh century and continued uninterrupted until 1757 when British rule was established.

During the Muslim period, emphasis was on the democratic principles of universal brotherhood, tolerance and social justice. The practical application of the principles of universal brotherhood resulted in the abolition of all previous artificial social ranks, and required everybody to work who wished to eat. Society under Muslim rule had a cultural commitment to democracy: freedom of individuals and the fundamental human right of education. Under this new social order, the educational philosophy was, education for all, irrespective of caste, creed, and colour. New stress was: "Brotherhood of truth is one in all ages; it is narrow men who create sects (1:883)." The Muslim rulers applied the principles of the prophet Muhammad's teachings, which

were: "Acquisition of knowledge is incumbent upon all the faithful, men as well as women; to seek knowledge from the cradle to the grave; ... "Go unto China in quest of knowledge;" which was a far-off land and a country of non-believers in Islam. ("Hadis" means sayings of the prophet Muhammad.)

According to Nath Law, a well developed education system emphasizing education as a preparation for life existed at that period. The curriculum of secondary and higher stages of schooling included study of ethics, arithmetic, accounts, agriculture, geometry, astronomy, economics, art of administration, physics, logic, natural philosophy, algebra, divinity and history (15).

Scientific and vocational education which linked education with actual life was emphasized in the system of education. Agricultural education was specially developed since the main occupation of the people was agriculture. Large amounts of money were spent for the development and improvement of agriculture and irrigation systems. Names of rulers like Sher Shah, Jehangir, Akbar, and Shahjahan may be mentioned as great patrons of agricultural development.

Regarding physical facilities available for education, "Max Muller, on the strength of official documents and a missionary report concerning education in Bengal (now Bangladesh) prior to British occupation, asserts that there were then 80,000 native schools in Bengal, or one for every 400 of population (10:5)."

One UNESCO study indicated that,

The rulers of Muslim India, were, however, great patrons of education and provided large sums of money to make it widely available. The names of Mahmud of Ghazni, Feroz Shah Tughlak, Sekander Lodhi, Akbar, Jehangir, Shahjahan and Alamgir stand out particularly in this respect.

Except during a few periods, the royal courts were thronged by renowned poets, philosophers, litterateur and historians, who for all practical purposes, formed a learned society with a monarch presiding, and provided the motive force in the cultivation and promotion of education. This body frequently acted as an advisory body in educational matters (12:16)."

Considering all these historical evidences it is apparent that the main emphasis of general and vocational education during the Muslim period was for social development; thereby laying the basis of social-philosophical foundations of vocational education.

### The British Period

After the Muslim rule, the British took control as a colonial power. The British period started in 1757 and continued until 1947. According to Adams and Bjork;

As early as the fifteenth century the riches of the Indian sub-continent attracted adventurous European traders. By the mid-nineteenth century, when India passed from the authority of the East India Company into the control of the British Government, it was considered the richest jewel in the colonial empire (2:76).

This statement also corroborates with a study paper of Pacific Studies Center by Carnoy;

Before its mid-eighteenth century conquest by the British, Bengal's industrial development was what a British commission in 1918 described as 'not inferior to that of the more advanced European nations'. Its cottage textile industry exported large quantities of fine cotton and silk cloth throughout the East and to Europe. More than self-sufficient agriculturally, Bengal exported rice, sugar, and butter. As part of the Mogul Empire--the civilization of the Taj Mahal--Bengal was Europe's equal, perhaps its superior, in everything but arms. Entering Dacca at the head of a victorious army in 1757, Lord Robert Clive exclaimed that 'this city is as extensive, populous, and rich as the city of London' (26:4).



During the colonial rule, British policy was mainly commercial exploitation of the country. It was a source of supply of raw materials and cheap labourers for the industrialized United Kingdom. Tax free imports of finished products from U.K. led to the destruction of the local indigenous industries. The people who were engaged in local industries and others producing sophisticated handmade products by cottage industries were completely ruined. The British used extreme measures to maintain control (e.g., amputating fingers of the weavers in Bengal, who produced the world famous Muslin silk). As described by Carnoy,

After first using tariffs and outright prohibition to remove Bengali cloth from British and European markets, the British introduced machine-made goods into the Indian market. Within a few years Bengal's cottage textile industry was dead, its practitioners pushed into subsistence agriculture.

By 1850, once-thriving Dacca had shrunk from Clive's 'London' of 150,000 people to a village of 20,000. And India was absorbing a quarter of Britain's textile output, providing for the employment of an eighth of the English working class (26:4).

During the early period of British rule no development of education took place. However, the systems of education that were developed during previous centuries, were doomed. Instead of any educational development for the welfare of the people, they exploited the country commercially to its fullest extent.

The same outlook was found in the field of agriculture. The colonial power was only interested in agricultural revenues and utterly neglected any development and improvement of agriculture in the country. In 1793, colonial rule under Lord Cornwallis, introduced a new system of land settlement known as Permanent Settlement. Under

the system, the proprietary rights of the land were vested in "Zaminders"-- a privileged class of people who were responsible to collect agricultural revenue. In the land revenue system, British rulers had no direct touch with the land and farmers of the country; hence they never felt the necessity of undertaking any development scheme for agriculture. As stated by Carnoy,

In the space of five years the company allowed Bengal's extensive irrigation system to fall into ruin and raised taxes so precipitously that farmers were forced to give up seed and livestock. The resulting famine in the early 1770s brought death by starvation to fully a third of the Bengal nation. But British capital increased by gigantic amounts from its plunder of Bengal, fueling the first stages of the industrial revolution in England (26:4).

Due to lack of any development in agriculture and education in the past, Bangladesh like many other developing countries previously ruled under colonial power, faced tremendous difficulties in improving agriculture. Farmers still follow primitive methods of cultivating land, even though, Bangladesh presently is completely dependent on an agrarian export economy.

In the first century of the colonial rule, the British were mostly busy with the consolidation of their conquests, fighting with French and local people. They were not interested in the educational welfare of the country. "During a debate in 1793, one member of the British Parliament remarked, we . . . lost our colonies in America by exporting our education there; we need not do so in India, too (18:32)."

After nearly a century of educational vacuum and darkness, Britain introduced the first measures of education reform. The main purpose of this new educational system was to create a small privileged

class of educated elite people to serve as leaders of illiterate masses and to do the clerical job of administration. A decisive blow was intended against the orientalist: "Macaulay argued for an education that would . . . form a class of persons, Indian in blood and color but English in taste, in opinions, in morals and intellect (4:601)." To strengthen this educational objective, the secondary and higher education curricula were based on Western humanities and liberal arts.

This new system of English education led to bifurcation in the strong traditional mainstream of education which had a direct link between people and their soil. The old system was not allowed to survive through state negligence and therefore it became obsolete by cutting off gainful employment. The product of the new educational system isolated the elite group from the masses of people and created a class by itself assuring the right of all privileges for themselves. Lord Macaulay's minutes (1935) considered that there was little in Indian language and culture that could be used for education. As viewed by Andrews, "He wanted to sweep away everything of the past and to modernize entirely, on English lines--to write on the clean state of the Indian mind the word 'English' (3:26)."

Gradually the older well organized educational system which was built through centuries by Muslim rulers, incapable of being dynamic and vitalizing, increasingly turned attention toward its glorious past; and the Muslims of British-India refused to accept this new education. The Muslims viewed the new education as a borrowed and imitated article. It did not cooperate with the national genius of its being and hence it was powerless to enrich the likelihood of its soul.

As observed by a Briton, Sir William Wilson Hunter:

Before the country passed on to us, they (Muslims) were not only the political but the intellectual power in India. They possessed a system of education which, to use the words of the Indian statesman who knew them best, however inferior to that which we have established, was yet no means to be despised; was capable of affording a high degree of intellectual training and polish; was founded on principles not wholly unsound, though presented in an antiquated form; and which was much superior to any other system of education then existing in India; a system which secured to them an intellectual as well as material supremacy (13:168).

However, Muslims after their long period of remaining aloof from the new education, ultimately accepted it under the influence of the Aligarh Movement sponsored by Sir Syed Ahmed.

In 1954, British parliament felt the responsibility of creating a regular school system from primary to the university level in India. The memorandum of Sir Charleswood recommended many developments in education. But no serious attempts were made for the implementation of his recommendations. In fact, Lord Curzon's University Act of 1904, the Government of India Resolution of 1913 and the Calcutta University Commission's Report of 1919, recommended some changes in the area of liberal arts at the university level and paid no attention to the development of vocational-technical education in the field of agriculture, commerce and industry. During this period of the twentieth century, a few local philanthropists came forward to establish some small vocational schools, and orphanages where weaving, spinning, knitting, sewing, and other handicrafts were taught. The Ahsanullah School of Engineering at Dacca was perhaps the only school worth mentioning.

It can be seen that no systematic attempt was made by the British to develop a sound system of vocational-technical education



with a wide scope for all. The kind of vocational education developed was for the preparation of clerks to run the civil administration and was limited for a few. The system of education under the British paid no attention in other vocational fields such as, agriculture, commerce and industry.

### The Pakistan Period

Pakistan developed as a result of the partition of the Indian sub-continent on August 14, 1947. For twenty-three years, Bangladesh was a part of Pakistan, and known as East Pakistan. December 16, 1971 was recorded as the day of dismemberment. Disintegration of Pakistan began on March 25, 1971 when the generals of West Pakistan launched their mission of suppressing the electoral decisions of the majority. Eight months later there were some 250,000 persons dead, ten million displaced citizens, thousands of raped women and orphaned children. Later the disintegration of Pakistan climaxed in the surrender of West Pakistani's 100,000 soldiers. Few nations can claim a chapter so dark in their history. The causes as expressed in an editorial of a Pakistani magazine were:

Power was concentrated in the bureaucracy and the army, both trained and tested by colonial Britain, aided and armed by imperial America. The poor were disfranchised; government unaccountable to the public. The callousness of our rulers was indiscriminating. Yet the more disadvantaged people of East Pakistan could only comprehend their condition as caused by regional discrimination. Their efforts to exercise their rights as a majority people were subverted in 1954, 1956, 1958, and 1969. In 1971 they were utterly brutalized.

. . . our armed forces are better trained to occupy the country than to defend it. The bureaucracy is raised to rule the people not to serve them. Their colonial ethos, authoritarian structure, mediocre

standards, and managerial outlook were suited to the service of their foreign mentors, and are unfit for a modern, independent nation (54:2).

The roots of disintegration in Pakistan date back to Britain's withdrawal from its Indian empire in 1947. Because India's Muslim minority feared domination by the Hindu majority, a new state--"Pakistan" was created from predominantly Muslim areas of the Indian sub-continent. Muslim areas in the northwest became West Pakistan. Although East Bengal was separated from West Pakistan by approximately 1000 miles of Indian territory, it was included in the new state as East Pakistan because its people were mostly Muslims. But there were profound differences between the two Pakistans. They had different languages and different cultures. The people in the West were mostly tall and light-skinned. Their land was largely arid. East Pakistan, by contrast, was tropical, and the people mostly small and dark-skinned. But the imposition of one-nation-state model on a practically two-nation-state through a centralized, authoritarian and non-representative political system intensified the regional alienation to the breaking point.

Bangladesh's population before it became independent stood at 78 million as compared with 58 million in West Pakistan; but Islamabad, in West Pakistan was the capital and the centre of all governmental control. West Pakistan, moreover took 80 percent of the jobs in the civil service, 90 percent of the posts in the armed forces (67).

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Democratic institutions in politics never really took root in Pakistan. As observed by Feldman,

By 1954 the real power had been assumed by the bureaucracy and guaranteed in a caretaker role by the military. Quite symbolic of this significant change was the dismissal of the National Government, the dissolution of the national parliament and the appointment of the chief of the Armed Forces as a Minister in the new government (8:65).

And in 1958 the military seized power and continued ruling the country until 1971.

In spite of all these incidents, the main cause for creating a sovereign independent state of Bangladesh evolved because of the control of the East Pakistan economy by the West Pakistani elite and their treatment of their colonial subjects. As observed by Carnoy,

The West Pakistani elite, which has monopolized the international aid funds granted for the government's first and second five-year plans, and has siphoned off the international exchange generated by East Bengal's jute export, is partially responsible for the lack of industry in the East. Since independence, West Pakistani capitalists have replaced Calcutta's rich Hindus as owners of the jute processing mills and export firms. If East Bengal could free itself of West Pakistani imperialism, it would have a favorable balance of trade. Its jute, just prior to the current crisis, was earning half of Pakistan's total income from commodity exports--some \$150 million a year (26:4).

The legendary 22 West Pakistani monopolist families controlled 80 percent of the banking, 70 percent of insurance and 66 percent of industrial assets of Pakistan. East Pakistan interests were never safeguarded in the distribution of national revenue, of foreign exchange and of central government expenditure, which can be seen in Table 2.1 with data about the five-year plan expenditures.

Similarly, in the field of education, discriminatory policies were adopted in the educational development of East Pakistan. This disparity of educational development between East and West Pakistan started from the beginning of the Pakistan period in 1948. Table 2.2 gives the picture of disparity in education expenditure in 1948-1949 and in 1953-1954.

Table 2.1

Regional Development Expenditure (In Million  
Rupees: 21 U.S. Cents Equal One Pakistani  
Rupee)

Sector	Second Plan 1960-65		Third Plan 1965-70	
	East Pakistan (Bangladesh)	West Pakistan	East Pakistan (Bangladesh)	West Pakistan
Public Sector	6700	10,800	11,300	13,700
Private Sector	<u>3000</u>	<u>10,700</u>	<u>5,500</u>	<u>16,000</u>
Total	9700	21,500	16,800	29,700
Distribution Percentage	31%	69%	36%	64%

Source: "Economic Development in East Pakistan", Federal Intervention in Pakistan, background Report VI, Information Division, Embassy of Pakistan, Washington, D. C. June, 1971.



Table 2.2

Comparison of Educational Expenditures,  
East and West Pakistan, by Level,  
1948-49 and 1953-54

Level of Education	Expenditures (Rupees)		Annual Rate of Change
	1948-49	1953-54	
<b>Primary:</b>			
East Pakistan (Bangladesh)	17,133,257	23,585,280	6.6
West Pakistan	20,078,851	40,371,272	15.0
<b>Secondary:</b>			
East Pakistan (Bangladesh)	4,633,380	5,378,680	3.0
West Pakistan	8,371,413	18,767,662	17.5
<b>College &amp; University:</b>			
East Pakistan (Bangladesh)	2,528,541	4,007,200	9.7
West Pakistan	3,247,938	16,536,565	38.5
<b>Source:</b> Education Section, Planning Commission, <u>A Brief Review of the Progress of Education Since Partition</u> , Edn. 23, March, 1955.			

The enrollment figures of the three main levels of education in early Pakistan (period of 1948) indicates, that enrollment in East Pakistan in all the three levels was higher than West Pakistan but expenditures for educational development in West Pakistan were higher during the same period.

Table 2.3

Enrollment by Main Levels of Education,  
East and West Pakistan 1948-49 and  
1953-54

Level of Education	Enrollment		Annual Rate of Change
	1948-49	1953-54	
<hr/>			
Primary:			
East Pakistan (Bangladesh)	2,531,324	2,792,895	2.0
West Pakistan	567,983	1,539,043	22.7
Secondary:			
East Pakistan (Bangladesh)	548,616	625,884	2.7
West Pakistan	534,300	711,881	5.9
Colleges:			
East Pakistan (Bangladesh)	21,851	22,468	0.6
West Pakistan	11,793	32,515	22.5

Source: Same as table 2.2

Data in tables 2.2 and 2.3 offer a startling contrast between East and West Pakistan. From the beginning West Pakistan followed an expansionist policy at the expense of East Pakistan (Bangladesh), with the end result of large gains in expenditure and enrollment being achieved.

It was, evident that the educational development plans and policies during the Pakistan period were presumably for the benefit of West Pakistan. No sincere attempts were made for the implementation of governmental educational plans and policies in East Pakistan (Bangladesh) that were presented at various intervals during the Pakistan period.



## CHAPTER III

### POLICIES AND PROGRAMMES OF EDUCATION AND MANPOWER DEVELOPMENT IN BANGLADESH

#### Introduction

It is sometimes argued by economists that if education is to be a good investment in the development of a nation, the products from education must fit the priority needs of economic growth. But to many educators the wisdom of this idea is not acceptable, for it seems to view students as future manpower units rather than as human beings, to be grossly materialistic, and to disregard the great humanistic aims and values which educators have cherished. This view was also expressed by many participants in a policy conference of Organization for Economic Cooperation and Development (OECD),

that it would be dangerous to base educational policy on manpower needs alone. Such a policy would be a negation of the freedom of individuals and their right(s) to attain the highest level of education of which they are capable. It would make little allowance for social aspirations (62:22).

Therefore, both educators and economists are now in general agreement that a nation's future manpower requirements should be given serious weight in formulating educational plans, but other social and individual objectives should also be weighed seriously. This approach is also supported by Thorsrud, "Education and work are not only means to an end but represent also basic values in human life (73:4)."

Therefore, this particular debate of social or economic approach to manpower has been largely resolved on the ground that education represents social values and is at the same time an increasingly important factor in economic growth. Economic growth is a necessary condition for social and cultural development in general. In a developing society like Bangladesh, proper utilization of manpower is both a social challenge as well as an economic requirement.

Gainful employment of the labour force is necessary for the development of a sound social structure and at the same time the availability of a skilled labour force is a pre-requisite of economic growth. The slow rate of economic growth in Bangladesh has brought into sharp focus that the number of new job opportunities being created fell far short of the number of new entrants on the labour market. A severe under-use of human resources, coupled with a population growth at the rate of three percent per year made the situation of Bangladesh extremely alarming.

However, in this chapter an attempt shall be made to discuss, (1) recent manpower and educational policies, (2) the system of secondary education and its curricular offerings and (3) vocational education available for the youth and adults in urban and rural sectors of Bangladesh.

#### Overview of Recent Manpower and Educational Policies

The Planning Commission of Pakistan, the supreme economic body of the country with headquarters in West Pakistan and with the

President of Pakistan as chairman, was responsible during undivided Pakistan for educational planning and other development plans. The Government of East Pakistan was only an executing agency for targets and policies set by the Planning Commission of Pakistan. Some funds based on the planned allocation were released by the central government to the East Pakistan Department of Education in support of the provincial programmes. Those allocations and the release of funds to East Pakistan were always at the discretion of the central government situated in West Pakistan.

From 1957 to 1963, there was no Chief of the Education Section of the Pakistan Planning Commission. Decisions of educational policy, priorities and financial allocations to education were reached arbitrarily and almost exclusively by economists. Emphasis was always on the productive sectors rather than on education. As described by a journalist of an esteemed newspaper of former East Pakistan,

The most funny thing about our economy is that it is planned, there is no doubt about it. This planning only allows big businesses to thrive who care little for human wealth. They will turn up only when there is easy return for their investment. Perhaps, this is why in all the three plans the so-called 'productive sectors', which can easily demonstrate an immediate return on investment were taken care of: education, which produces human wealth in the form of educated and skilled labour force, got the left-overs (68:4).

Nevertheless, education was one of the most neglected areas of economic planning during the Pakistan period. Planners and policy-makers in Pakistan neglected to see educational outlays as a form of investment with high potential economic benefits, perhaps because investment in education was less tangible and less spectacular than

investments in the productive sectors. Evidence of this can be seen in the implementation of Pakistan's Third Five-Year Plan (1965-70). The event of the 1965 war with India, with the unforeseeable rise of defense expenditures and sharp decrease of foreign aid, resulted in expenditures for education being sharply cut by 13 percent in the revised plan (83).

In addition, during the first four years of the Third Five-Year Plan, only 39 percent of the revised plan's allocation for education was released. As goes in the survey report of the Government of Pakistan,

The Third Plan originally allocated Rs. 273 crore in the public sector for education which was subsequently revised to Rs. 237 crore. ... The rate of implementation remained slow during the first four years of the Third Plan, when only Rs. 92.01 crore or 39 percent of the allocation was utilized against the overall plan implementation (33:251).

None of the other sectors of the plan suffered so much shortage in resource availability, as did the education and social sectors.

Educational expenditure in Pakistan, in relation to Gross National Product was one of the lowest in comparison with the other developing countries. The data in Table 3.1 gives the general picture.

It is evident from the data in Table 3.1 that the position of Pakistan was behind in comparison with other developing nations except India. It was also acknowledged in the proposals for the education policy of 1970,

Table 3.1

**Comparison of Percent of National Income  
Spent on Education in Pakistan and Other  
Developing Countries**

Country	Year	Total Public Educational Expenditures as Percent of GNP	Recurring Public Expenditure as Percent of GNP
Pakistan	1964	1.9	1.1
Other Developing Countries:			
India	1962	0.8	2.4
Thailand	1964	2.8	2.3
Argentina	1964	3.2	3.1
Chile	1965	3.6	3.2
Columbia	1964	3.1	3.0
Mexico	1964	2.0	1.7
Ghana	1965	4.7	4.0
Nigeria	1962	2.6	2.2
United Arab Republic	1964	4.8	4.4

Source: UNESCO, Statistical Year Book, Paris, 1968.

With its total expenditure on education accounting for about 1.8% of G.N.P., Pakistan ranks among the countries which accord a low priority to education. UNESCO has recommended that a developing country should devote 4% of its G.N.P. to education. The wisdom of this is manifest in case of a country such as Pakistan which, with few known natural resources, must depend on education to improve the quality of its manpower if it is to make any real breakthrough in development (85).

Investment in human capital as emphasized in other countries indicates that education plays a multiple role in the modernization process. In addition to social and cultural development, education plays an important role in economic development of a nation. The



evidence of which can be seen in research related to developed as well as developing countries. Schultz reported the economic return from education in the United States to be between 18 and 30 percent of the economic growth (69). In studies with developing countries; Dougherty, found that the rate of returns to investment in secondary education in Columbia in 1968 was 21 percent, to vocational training 21 percent and to university training 16 percent (96). In a similar study for Chile, Harberger and Selowsky, found the rate of return was 24 percent for investment in primary education, 29 percent in technical, 16.9 percent in secondary and 12.2 percent in university education (100). Marshall, stressed the importance of education as a national investment and expressed his view that the most valuable of all capital investments was investment in human beings (17).

All the cited studies were indicative of high potential economic benefits of education which were mostly overlooked (Table 3.1) by the planners and policy makers of Pakistan, who were responsible for education and manpower development of the former East Pakistan (now Bangladesh).

The planners of Pakistan considered physical capital accumulation as the exclusive factor in economic development and education was viewed as a consumer service. Education, in the National Accounts of Pakistan was treated as current consumption and not as an investment. Consequently, all the Five-Year Plans of Pakistan which were based on macro-economic planning models reflected only a short-sighted approach for physical capital investment. Even this approach to planning has been acknowledged by Mahbub-ul-Haq, the then Chief Economist of Pakistan

Planning Commission in his book, The Strategy of Economic Planning (11).

In the various macro-economic models in the book, education was always viewed as a claim of the distribution of economic growth, rather than as a factor of production of economic growth. Again, Haq held the view regarding manpower planning,

... this is not, just a planner's headache or Government responsibility. This, in fact, is a social responsibility. Ultimately, no Government can dictate where people should go and work, which institutions they should attend and what kind of education they should get, unless it is based on a different pattern altogether than ours. The Government can merely provide a framework within which intelligent manpower planning is possible for the individual (63).

There is no denying, that in a democracy every individual should have freedom and right to plan his own career. But it was very difficult to apply that concept in the context of Pakistan's situation where the illiteracy rate was one of the highest in the world.

Provision of only the framework by the Government without providing adequate educational facilities could not fulfill the objective.

Adequate educational infra-structures, such as provision for vocational education, guidance and counseling services, and employment placement bureau, were particularly lacking. Only with the provision of adequate educational services could individuals get opportunities to select a useful course of study, to plan their career and thereby become an asset rather than a liability in a democratic society.

However, the magnitude of inadequate planned manpower and education was described by Adam Curle, who had been intimately acquainted for more than a decade's national planning in Pakistan, as follows:



It is interesting that the broad lines of educational policy and the financial allocations for education, in all three plans with which I have been associated, were arrived at in a very arbitrary way. Nobody had, and so far as I knew nobody has, any reliable empirical method of determining the appropriate proportion of planned expenditure to be devoted to education, or social welfare, or health, or any of the factors which do not give a directly measurable return (6).

Curle's critical comments show that planning in education and manpower in Pakistan needed more than merely establishing on paper the future educational targets or the administration of prescribed governmental funds for education. For educational planning, it was necessary to consider the dynamic nature of the manpower requirement picture and project all skills which were likely to be potential bottlenecks. In addition, functional manpower requirements should have been defined in terms which were meaningful to educational and training institutions, and the skill requirements should have been converted into corresponding training requirements. Manpower requirements depended on what happened in the economy in respect to the national goals. The goal of integration between educational and overall development planning can be explained by quoting from UNESCO illustrating the case of Soviet Russia.

Every development plan (long-term, medium-term, short-term) contains targets for education and culture and provisions for appropriate financial outlays. These educational targets are closely linked with the other economic and social targets. The thinking behind this is that there is no point in creating new productive capacities if there are not enough engineers and qualified workers to operate them. There is little sense either in training individuals with skills for which no productive employment is in sight. The two processes must be co-related so as to avoid waste of resources, both material and human, and maximize the rate of growth (16).

Analyses of the past and present conditions of the labour market, skills and training requirements are necessary to prepare a set of alternative decisions or plans for future action pertaining to education. But in regard to the situation of Pakistan, no serious attempts were undertaken to establish an adequate basis for educational planning. The evidence of this deficiency can be seen in the Mid-Plan Review of the Third Five-Year Plan of Pakistan, "the development of human resources and manpower planning have remained the weakest area in our planning experience so far and it is only appropriate that they should receive greater attention at the present stage of our development (35:312)."

Based on a recommendation by the Pakistan Planning Commission, a National Manpower Council was established as a permanent inter-departmental Government agency. The council, served by a Manpower Directorate, working in close cooperation with the Planning Commission was responsible for formulating national manpower programmes. The potential contribution of such a council to the development of a comprehensive manpower plan, can be described by quoting from the Fourth Five-Year Plan of Pakistan,

The statistical base for manpower planning is poor. There is considerable inconsistency and unreliability in vital data. Existing arrangements for periodical review and assessment of manpower situation or for follow up programmes in terms of national objectives and targets are also inadequate. The whole technique of manpower planning is new and there is a great shortage of professional staff and facilities. New arrangements are, therefore, required which should be based on a proper appreciation of the functions and shortcomings of the present organization (84:110).

An attempt to project manpower needs for the development of human resources in Pakistan first started during the Second Plan

period (1960-1965) and such efforts continued until the Fourth Plan. The projections of labour force, employment and unemployment as envisaged in the Fourth Plan (1970-75) of Pakistan are given in the following table.

Table 3.2  
Projection of Labour Force, Employment  
and Unemployment During Undivided  
Pakistan (in Millions)

	1965	1970	1975
<b>Undivided Pakistan</b>			
<b>Total Labour Force:</b>	<b>36.7</b>	<b>42.3</b>	<b>48.8</b>
Agriculture, Forestry & Fishing	26.9	30.2	33.7
Other Sectors	9.8	12.1	15.1
Unemployment	7.5	7.5	6.5
Employment	29.2	34.8	42.3
Unemployment in Percent of Labour Force	20.4%	17.7%	13.3%
<b>East Pakistan (Bangladesh)</b>			
<b>Labour Force (both sexes)</b>	<b>21.2</b>	<b>24.7</b>	<b>28.6</b>
Male	17.9	20.8	24.1
Female	3.3	3.9	4.5
<b>West Pakistan</b>			
<b>Labour Force (both sexes)</b>	<b>15.5</b>	<b>17.6</b>	<b>20.2</b>
Male	14.0	15.9	18.3
Female	1.5	1.7	1.9

Source: Computed from the data available in the Pakistan Fourth Five-Year Plan 1970-75, Government of Pakistan Planning Commission, Islamabad, 1970.

The estimates presented in Table 3.2 focus attention on the magnitude of the problem for providing employment for the growing labour force which Bangladesh will continue to face in years ahead. Reconstruction and development work in Bangladesh demands skilled manpower. If the labour force is not trained and equipped with some saleable skills in accordance to the social and economic needs of the country, then they will be a great burden on the society.

Analysis of the System of Secondary  
Education and Its Curricular  
Offerings

A nation's educational system should be an important contributor to the work, skills and knowledge of its labour force. A planned effort to modify the character and improve the quality of the human factor of production in line with general objectives for economic development and growth should rely on the educational system, although other social institutions have important roles to fulfill. The programmes and policies have to be devised so as to establish the desirable relationship between manpower and education. Economic development can be enhanced if qualified and technical personnel are produced in the required numbers to satisfy the manpower requirements of the country. The application of science and technology is a fundamental factor influencing the pace of economic development.

One of the basic problems in Bangladesh is the insufficient application of science and technology in production and daily life. The economic benefit which might be expected to result from widespread basic knowledge and application of science and technology has not

taken place in Bangladesh. Masses of farmers and workers are illiterate; and hence are limited in their ability to apply the techniques which could greatly improve their production and standard of living.

It is imperative that every citizen should have some understanding of the application of scientific principles. First, those who may work at relatively unskilled levels, need some knowledge of science and technology to exploit opportunities of life, and to be able to do their own jobs efficiently. Next, those who would be employed in skilled occupations, need a greater degree of scientific knowledge for performance of the tasks and processes under their control which are based on scientific principles. At the higher levels the need for science and technology are still greater. Therefore, the need in Bangladesh for technical-vocational education which includes the application of scientific principles is obvious.

The curricular offerings of secondary education in Bangladesh is predominantly literary and general in character. It appears to offer very limited instruction in the application of scientific principles, and consequently provides limited help from the standpoint of employment or self-employment. The existing system of education in Bangladesh was designed to produce white collared generalists for government clerical services and not to impart the analytical and technical skills on which economic progress can be based. The system does not cater to the different aptitudes, interests and talents of students. As in the words of the Report of the Commission on National Education,

When in this century our society underwent a rapid series of changes our schools remained static, isolated from the social, economic and industrial revolution around them, and failed to meet contemporary demands. The main weakness of secondary education is the absence of full opportunities for training in technical and other vocational subjects, and its inflexibility and lack of diversification which fails to correspond to social needs and individual aptitudes and interests (32:111).

According to the recommendations of the above Commission, a scheme of diversified practical courses, such as, agriculture, commerce, science, industrial arts and home economics were introduced in the secondary school system. The following table gives a general picture of curricular offerings by the different high schools of Bangladesh during the year 1968-1969.

It appears from Table 3.3, that humanities was the course most commonly offered in the high schools of Bangladesh. The course least frequently offered was industrial arts. The percentage of schools offering various courses were 100 percent in humanities, 42.8 in science, 19.7 in commerce, 1.2 in home economics, 0.4 in industrial arts and 2.3 in agriculture.

The curriculum of secondary education in most of the schools placed emphasis on the humanities, and has been described as academically narrow and bookish. With such education it is difficult to get a job. The draft for the proposals of a new education policy (1969) described the situation as, "Not only does it lead to the underemployment of national resources, it causes untold frustration to those who, having invested a number of years of their lives in educational institutions and fired by the idealism of youth, fail to find any opportunities for contributing to national development and are unable to earn a decent living (85:22)."

**Number of High Schools Offering Various Courses in East Pakistan (Bangladesh) During the Year 1968-69**

\*The same school may offer courses in the humanities, science or other combinations of courses.

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The problem is further aggravated by the social attitude of the country towards manual work. There exists a long standing prejudice of the educated people against manual work. It is almost an inherent aversion of the intelligentsia toward manual labour. The traditional education in Bangladesh inherited from colonial rulers made the people believe that manual work was for the illiterate class of people and those persons who have a school education should not perform manual work. According to the Report of the Commission of Education (1959),

...there exists a widespread reluctance to dirty the hands and a tendency to regard manual labour as something reserved for a particular class of people. We are disturbed to find the general impression that the education system has contributed to the development of these attitudes, and it is a matter of great concern to us that education should, in any way, be a party to the maintenance of cleavage and division within our nation (32:245).

Social prejudices against manual work are one of the main hindrances to the development of vocational-technical education in Bangladesh. This can be seen from the social attitude that the status of craftsmen, technicians, and labourers are very low and are not recognized as desirable occupations.

An equally serious limitation of secondary education is that it is not designed as a terminal stage, but as a preparation for entry to higher education. In reality, only a small percentage of secondary school graduates secure a college or university education. The vast majority of secondary school graduates interrupt their formal education at this level and explore opportunities in the world of work and assume adult responsibilities. Paradoxically, the curricula of secondary education are rarely designed to provide this majority group



with essential skills for various occupational areas to meet the employment requirements of and to be absorbed in the growing economy of the country.

These are the major factors contributing toward a short supply of middle-level skills, on the one hand, and a large scale of unemployment situations on the other in Bangladesh. Referring to the secondary education of Bangladesh, Benson in his study in 1970 pointed out,

Some unknown number of persons invested 10 years (or more) of their time in completing a secondary school and then failed to pass the matric exam. Because secondary education does not offer a person saleable skills outside (other-than) white collar work and because white collar employers commonly demand matric standard or higher as entry qualifications, the employment prospects for such persons outside their own village, say, are not bright. They can properly be regarded as failures of the education system (23:67).

It has been said that the education system in Bangladesh is producing mainly failures. Failures with regard to individual's personal prospects and with respect to the contribution he might have been able to make to his country and its development. Therefore, adjustments are necessary with respect to enrollment and curricula of secondary education, in order to maximize the contribution of education in socio-economic development of the country. Thus, considering the dynamic pattern of the economy there should be a massive shift towards vocational-technical education, if secondary education is to stop wasting resources in producing unemployable manpower. Preference should be given to those types of education which are of crucial importance for development in Bangladesh, such as skilled manpower at the secondary level and below that level.

The priority of vocational-technical education at the secondary level was also recognized by UNESCO conference on the application of science and technology to the development of Asia which was held in New Delhi in 1962: "It is particularly important in Asia to develop secondary level manpower as the highest priority and at the same time to strengthen the future scientific and technical potential of the Asian nations by discovering individuals talented in science and technology and nurturing this talent through the entire educational and training process (50:81)."

Efforts directed toward increasing facilities and expansion of vocational-technical education offer less risk than in expanding regular secondary education. When the graduates from vocational-technical education are not absorbed in the economy, they have greater likelihood for self-employment. This could improve the production in daily life and thereby improve the standard of living.

#### Vocational Education for Youth and Adults

The present educational attainment of the labour force in Bangladesh is considered to be extremely low. The percentage distribution of the labour force by a level of educational attainment as projected by Karawanski is given in Table 3.4.

From table 3.4, it can be said that at present, about 85 percent of the labour force may be considered as illiterate, i.e., comprised of the persons who have not completed primary education (Grade V). The remaining 15 percent have completed grade V or more. The figures focus attention on the need for adult education in Bangladesh.

Table 3.4

Percentage of Educational Attainment  
of Labour Force in Bangladesh

Years	Total Labour Force	Level of Schooling Attained	
		Nil or Below Grade V	Grade V and Above Passed
1965	100.0	88.3	11.7
1970	100.0	84.1	15.9
1975	100.0	78.3	21.7
1980	100.0	71.3	28.7

Source: R. A. Karawanski, Education and Supply of Manpower in Pakistan, Planning Commission, Islamabad, 1970.

Opportunities available for vocational education for youth and adults may be described under two headings: (1) urban sector, where industries are the main users of labour force and, (2) rural sector, where agriculture plays a dominant role in Bangladesh's economy.

#### Urban Sector

In the past, the private industries which dominated the urban economy of Bangladesh never accepted any responsibility for the training of its workers. Under a training programme for skilled manpower, there are two important categories, the training of new entrants and upgrading of existing workers. No adequate arrangement was available in Bangladesh for either of these two categories. Although the policy of industrial development in Bangladesh was labour intensive, the training of new entrants was carried out mainly by observation.

The programme of industrial development in Bangladesh omitted the important factor of adequate training facilities for workers. The lack of programmes of on-the-job training and skill development appeared to be directly related to lack of productivity improvements of the industry. The workers had no opportunity to increase their efficiency and were left unguided and uncoached by industry. A high level advisory panel from both parts during undivided Pakistan in a manpower study (1970) recognized this aspect of training programmes. Referring to on-the-job training the report of the advisory panel stated,

This component is vital not only for increasing productivity, but also to ensure that our developing industry does not suffer a major set-back in its further growth and development, one that may, with further passage of time, become insurmountable. Industrial development and industrial productivity on the other hand, will get a great fillip if skilled manpower of the correct type is provided at the minimum cost (35:317).

Apprenticeship programmes are another important aspect of industrial training which are universally accepted as an important source for supply of skilled manpower. However, apprenticeship programmes were lacking in Bangladesh. During the Pakistan rule, the private industries in East Pakistan (Bangladesh), owned by West Pakistan's capitalists, never provided for any training programmes. The lack of support of industries for such training schemes, has been described by Bari, "This is because our industries now enjoy unique advantage i.e., lack of competition; whatever they produce, whatever might be its quality and whatever it might cost, they find ready market (94:8)."

These private industries had many facilities and much potential to bridge the gap between the demand and supply of trained manpower in the world of work. As such the then Government of Pakistan initiated a national apprenticeship ordinance in 1962 requiring certain categories of industrial establishments responsible for operating systematic programmes to train apprentices equal to at least 20 percent of the total number of persons employed. In East Pakistan (Bangladesh) the Act was adopted as a provincial ordinance and introduced in July 1968. But the implementation of the programme was resisted by the powerful capitalists of West Pakistan who owned the major industries of East Pakistan and virtually controlled the whole economy of Pakistan. As a result, the industries in the then East Pakistan shared very little responsibilities with the government to produce skilled manpower in the form of apprenticeship training or any training programme to improve and upgrade the workers. This can be seen from the statement of the government of East Pakistan, Department of Labour, Health and Social Welfare, Management Development Centres in 1968,

The apprenticeship training of developing skilled workers, if systematically organized and conducted, becomes the most effective and efficient method. But this has been neglected in this country. Only 1214 skilled labourers have been trained during the last eight years in East Pakistan (99:6).

The advisory panels on manpower in 1970 held similar views, about the importance of industry sponsored training programmes,

Industry, the main user of skilled manpower, should be given the major responsibility over the training of its workers. Industry should make arrangements and meet most of the cost of technical and vocational training. The deal will be to make every employing organization a training organization (35:318).

### Rural Sector

The economy and population of Bangladesh are overwhelmingly rural. Agriculture which is the main occupation of rural areas is the foundation of Bangladesh's economy. Of the country's total population of approximately 75 million, 85 percent (36) were direct tillers of the soil; more than 90 percent (87) live in the rural areas; and most of them derive incomes from agricultural activities. Of this rural population, approximately 20 percent own one acre or less and can be classified as landless. Above this landless group the small farmer who own between one and seven acres of land comprised 70 percent of the population who were tillers of the soil. The final 10 percent owned more than seven acres and were classified as large land holders (88). This group also controls the commerce of rural areas, such as, trading, processing of agricultural products, rural credit, traditional manufacturing, and construction. This agricultural sector, prior to Bangladesh, contributed 58 percent (39) of the gross provincial product and 95 percent (37) of the province's export earnings. Hence, the dominant role of agriculture in the economy of Bangladesh is apparent. But the results of agricultural development in Bangladesh have been very disappointing. Although some projects faced some technical difficulties, what they all had in common was the failure to organize and train farmers for using modern agricultural inputs. According to Thomas,

The rapid growth that is taking place in a number of developing countries is based on a major transformation of the technology of agriculture. This transformation takes place with the coordinated application of a package of modern agricultural inputs. ... (such as) ... fertilizer, pesticides, new dwarf varieties of high-yielding seeds highly responsive to fertilizer, and the controlled application of water (103:3).

Similar views were expressed by Falcon's "The Green Revolution: Generation of Problems (60)." However, the introduction of modern agricultural inputs should be supported by training programmes for farmers. Introducing modern inputs to traditional farmers is of little meaning without training. In the case of Bangladesh, systematic arrangements for and facilities for educating farmers were very much limited. The agricultural extension and demonstration system in Bangladesh which was responsible to educate the farmers and show the benefits of employing new technology were not as effective as they should have been. According to a USAID agricultural extension review team which visited East Pakistan (Bangladesh) in 1968,

The Union Agricultural Assistant, the spokesman for extension at the local level, is not regarded as an educational leader by farm people. He is looked upon instead as one to perform certain regulatory and service functions. His present activities do not tend to develop the people themselves (106:5).

Attempts to rapidly increase agricultural production in Bangladesh omitted an important factor: education and training of farmers. Any major increase in agricultural output would be very difficult without involving the small farmers which comprise 70 percent of the rural population. Hence, there was a need for provision of adequate training facilities so that farmers can utilize modern agricultural inputs.

However, agriculture which is the dominant sector of Bangladesh's economy was greatly neglected in the past. According to the Third Plan,

Though the contribution of the agricultural sector to the gross national product has declined from about 60 percent in 1949-50 to less than 50 percent in 1964-65--mainly due to rapid industrialization--agriculture is still the largest segment of the economy (82:393).

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The rate of agricultural growth stagnated during the 1960s when East Pakistan had to import an average of 2 million tons of food grain annually to feed its population. The present situation of food production in Bangladesh can be described by quoting Ensminger and Andrews,

No problem facing the new government will be more complex, time consuming, costly and more beset by uncertainties than that of providing food for all the people. Yet it is probably in this rural sector and upon the strength and muscle of the Bangladesh farmer that hangs the hope this country will survive as a viable nation (97:2).

The most important resources that Bangladesh has are fertile agricultural land and plentiful labour. If this plentiful labour could be trained as to how to handle this agricultural land efficiently, then the growth of production could keep pace with the growth of population. As observed by an expert of the Development Advisory Service of Harvard University,

If Bangladesh could raise rice yields per acre to half that of Japan, it could produce a surplus of 4 million tons annually and there is no technical reason why this couldn't be accomplished. Major increases in agricultural production have taken place in other Asian nations and the basis for such a breakthrough exists in Bangladesh. It is based on a major transformation of the technology of agriculture (104:9).

In this regard, Schultz in his work "Transforming Traditional Agriculture", laid great emphasis on the connection between education and agriculture. In Japan for instance, the primary school curriculum has greatly contributed to agricultural development (22). Whereas emphasis of primary education in Bangladesh is bookish in character which has no connection with any practical arts subject such as agriculture. In reality, a vast majority of the primary school

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students who cannot afford to continue school drop out of school. This group will normally be available to enter farming which is the basic occupation of 85 percent of the people in Bangladesh. The Fourth Plan identified the problem as,

In the past, too much emphasis in education was placed on preparing people for desk work occupations in the services sector of the economy and too little on preparing people for occupations in agricultural and in manufacturing industries. Few facilities at present exist for providing young people training in crafts and trades directly associated with rural life and the agricultural economy (84:146).

As a result, the problem of unemployment is almost inherent in the rural sector of Bangladesh. According to the Fourth Plan,

The existence of large numbers of the unemployed and underemployed especially in the rural areas of East Pakistan (Bangladesh), remains a major social and economic problem (84:107).

The Pakistan Census Report of 1961 (87) and successive manpower surveys indicated a high degree of potential unemployment and under-employment in agriculture, and in other areas such as traditional manufacturing, construction, and petty trade. This was described as partly due to under-utilization of skill in the agricultural and non-agricultural sectors. The Rural Works Programme introduced by the Government in the hope that it would generate some jobs and assist in creating new avenues of employment was also suffering from the lack of various skills in rural sectors. The agricultural subsistence economy in rural areas could not afford to engage the farmers more than six months of a year. An increase in agricultural production through application of labour intensive agricultural technology could create more employment.

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The preceding factors appear to be intensified due to the lack of educational development in the rural sectors which could serve as a powerful accelerator of rural modernization. Secondary education in Bangladesh was financed in whole or part by private bodies such as municipalities, groups of citizens, religious endowments, and by philanthropic organizations. This means that high schools existed where private enterprise and beneficence were available, and as a result high schools were not well distributed geographically.

As against a total of 4,172 secondary schools (90:442) in 1972, only approximately 40 such schools were managed and controlled by the government. A limited number of government high schools with better amenities and physical facilities were located in the urban areas, whereas 85 percent population of people were living in the rural areas. The reason for such disparity was the tendency of planners to use resources for expanding educational institutions in the show places of the country thereby widening the gulf between the urban schools and the rural schools. Expansion and improvement of rural educational facilities was viewed as an important factor for the development of Bangladesh as a whole. The vast majority of the untrained labour force in the rural areas instead of becoming useful human resources was a constant drag to the economy of Bangladesh. As observed by Coombs in 1968, "Economic development experts and policy-makers have largely come to regard agricultural and rural development as perhaps the number one problem for many developing countries, deserving of a higher priority than it has been getting (5:6)."

Some of the important tasks of developing the rural economy, especially in agriculture, would include use of fertilizers, protection



of crops, improving soil fertility, irrigation, and better management of forests and pasture land. Implementation of these and other practices for improving agriculture in the rural areas calls for agricultural personnel with education at the secondary level who will work at the grassroots level. But there was a great shortage of agricultural extension personnel at this level. As reported by Thomas in 1971: "The biggest problem for the agricultural extension system has been the lack of trained personnel available and willing to undertake extension work (103:10)."

Other developing countries of Asia have similar problems as can be seen in the report of UNESCO conference on the application of science and technology to the development of Asia in 1968. In the words of the report, "... there is an increasing demand for middle-ranking specialized personnel to serve the rural population, hence it is of fundamental importance to provide technical agricultural training for such personnel, particularly as this enables a proper balance to be established between technological development in rural areas and that in urban areas (50:66)."

## CHAPTER IV

### VOCATIONAL-TECHNICAL EDUCATION IN BANGLADESH:

#### ITS STRUCTURE AND PROBLEMS

##### Introduction

There was very limited development of vocational-technical education at the secondary level in Bangladesh. The various departments of the former East Pakistan government trained personnel in their specific fields and vocational-technical education was seldom considered to be an integral part of the overall process of education. The system of education and training existing in Bangladesh was inherited from the government of East Pakistan.

The scope and definition of vocational and technical education developed by UNESCO for international purposes was used as the basis for analysis of the situation in Bangladesh: "Technical and vocational education is taken to mean any form of education relating to the practical, theoretical and general preparation of persons for specific callings in agriculture, industry and commerce (51:3)."

Using the above definition, the existing efforts for conducting and developing vocational and technical education at the secondary level in Bangladesh were reviewed under the following headings:

1. Directorate of Public Instruction.
2. Directorate of Technical Education.



3. Directorate of Labour.

4. Directorate of Commerce and Industries.

#### Directorate of Public Instruction

The Directorate of Public Instruction was concerned with the implementation of policies and programmes in schools at primary, secondary and higher levels and was the central authority for the educational system. Under this Directorate, there was one Education Extension Centre for implementation of diversified vocational programmes in high schools and four Boards of Intermediate and Secondary Education to conduct public examinations. Under the Director of Public Instruction, there were five Deputy Directors, one in the Office of the Director and the other four, each in charge of one of the four Divisions of Bangladesh. From the Divisional level, the Deputy Director controlled the educational system through district education officers at the district level, sub-divisional education officers at the sub-divisional level and thana education officers at the thana level. In each division, there were several primary teacher training institutes which were controlled by the Deputy Director of the respective division. Higher institutions, such as teacher training colleges for preparing secondary teachers and government degree colleges, were controlled directly by the Director of Public Instruction. However, only the efforts under the Directorate of Public Instruction for developing vocational education were reviewed within the scope of this study.

In the past, the Directorate of Public Instruction was responsible only for general education. But in 1959, the Commission on National Education recommended that vocational-technical education

should form an integral part of the educational system and it should function in general secondary schools through a scheme of diversified practical courses, such as, agriculture, commerce, industrial arts and home economics (32). These recommendations were implemented by the Directorate of Public Instruction through some pilot and multilateral high schools. In those schools the compulsory subjects, such as mother-tongue, English, general mathematics and social studies were supplemented by at least two or more groups of electives out of the following groups: agriculture, home economics, commerce, industrial arts, advanced science, and humanities. General science was compulsory for students in the humanities and commerce groups. The above mentioned groups of subjects were also offered in the bilateral high schools. The data in Table 3.3 of Chapter III provides information about the extent of offerings of vocational-technical courses by the various kinds of high schools in Bangladesh. This educational development through pilot schools was followed by the establishment of a total of twenty-one pilot secondary schools in Bangladesh and one education extension centre at Dacca.

The Education Extension Centre at Dacca was established in 1959 as a specialized branch under the Directorate of Public Instruction for development of a new educational programme. The Education Extension Centre was initially supported by a Ford Foundation Project administered by the University of Chicago. However, the pilot school project and Education Extension Centre were a joint endeavour of the Ford Foundation, the University of Chicago and the former government of East Pakistan (Bangladesh) to improve the quality of instruction

and to enrich educational programmes through the introduction of diversified courses in the secondary schools of the area.

The purposes of establishing an education extension centre, as stated in the document of the scheme were,

It is the announced plan of East Pakistan (Bangladesh) to re-orient its education to meet the needs of the children, the province, and the nation, chiefly by introducing science and vocational subjects, by improving teaching methods and by diversifying the programme. This plan requires for its accomplishments the re-training and refresher training of teachers, headmasters, inspectors and other education officers. There is now no education service to perform this function systematically and effectively (89:1).

Since its inception on July 1959, the Education Extension Centre performed multifarious functions toward fulfillment of its objectives. According to the progress report of its first ten years (1959-69), the centre was charged with the following principal responsibilities,

1. To help the secondary school teachers acquire up-to-date knowledge of teaching methods and increase their efficiency in teaching their respective subjects.
2. To help headmasters and headmistresses as far as practicable to deal with problems arising out of introduction of diversified courses--like advanced science, commerce, agriculture, home economics and industrial arts.
3. To assist in the general improvement in the curricular programme of the pilot secondary schools.
4. To arrange seminars and conferences for inspectors, education officers and other top ranking officials of the education department.
5. To disseminate knowledge about different aspects of education through the publication of journals, booklets, etc. (38:3).

During this period of ten years from July, 1959 to June, 1969, the Education Extension Centre conducted 361 short courses ranging from one to ten weeks duration for secondary teachers and school administrators; more than 8200 participants attended these courses. In addition, the Centre organized 11 long courses of one academic year duration which were attended by 111 teachers of vocational subject areas.

Apart from the in-service training programmes, the Education Extension Centre was charged with the responsibility of providing leadership to and direction of the new vocational-technical curricula to twenty-one pilot schools which served as demonstration schools for other secondary schools. It was anticipated that these twenty-one pilot schools would serve as demonstration centres and thus facilitate the expansion of such programmes to other schools. The purpose of the on-going pilot-secondary school scheme as stated in the Third Five-Year Plan (1965-1970) was, "The scheme aims at developing a selected number of schools, with an expanded and diversified curriculum, to serve as models for others (82:192)."

Inspection of the government documents regarding the purpose of pilot schools revealed that no provision was made for representatives from neighbouring schools to visit pilot schools or vice-versa. Responsibilities of the Education Extension Centre (85:8-9) did not include such visitation programmes. Hence, there was practically very little opportunity for other secondary school personnel to visit the pilot schools for studying and observing the operation of new procedures and programmes adopted in pilot schools. As a result, there was very little interaction between the pilot school personnel

and other school personnel who were supposed to imitate the pilot schools. It is questionable, how successful these pilot schools were as demonstration centres. As observed by Allison, an U. S. advisor attached to Education Extension Centre, Dacca, "While there may have been some visits to pilot schools by headmasters and teachers of other secondary schools, there is little evidence to suggest that a planned programme has been established for this purpose (55:95)."

Secondly, the pilot schools were organized and developed to such perfection by foreign and local experts of the Education Extension Centre that these were considered by personnel in other ordinary secondary schools as some sort of "Ivory-towers" and beyond the capacity of other ordinary schools to follow the pilot schools. The specialized equipment, laboratory facilities, and trained teachers became a great barrier to the regular schools when they attempted to follow the pilot school programmes and introduce vocational-technical courses. The facilities available in the pilot (pioneer) schools as stated in the ten years progress report of the Education Extension Centre, were:

Facilities for diversified courses mean provision for appropriate aids and equipment. So these pioneering secondary schools of the province have been supplied with additional equipment needed for science laboratory, industrial arts, and arts and crafts workshop, and those required for practical aspects of teaching agriculture, home economics and commercial subjects. Most of these materials have been brought from abroad through the University of Chicago Pakistan Education Project out of funds provided by the Ford Foundation for the purpose (38:25).

The great question faced at that stage was whether or not the facilities provided mainly by Ford Foundation to pilot schools were

practicable and possible for other secondary schools to imitate with their limited financial resources. The government's resources were limited as to the extent of financial aid which could be provided to these schools to develop like pilot schools. Hence, the failure of such a scheme can be seen from the poor response of the secondary schools as shown in Table 3.3. The percentage of schools offering various courses in 1968-69 were 100 percent in humanities, 42.8 in science, 19.7 in commerce, 1.2 in home economics, 0.4 in industrial arts and 2.3 in agriculture. Obviously, the efforts for developing vocational-technical education through high schools of Bangladesh under the Directorate of Public Instruction calls for a different system.

#### Directorate of Technical Education

The Directorate of Technical Education was established in 1961, on a level equal to the Directorate of Public Instruction. The Director of Technical Education, and a Board of Technical Education established in 1969 were responsible to promote the development and improvement of vocational-technical education at less than college degree level. The Directorate of Technical Education was somewhat smaller than the Directorate of Public Instruction. The Director of Technical Education with some deputy and assistant directors mainly in the office of headquarters, controlled the Polytechnical Institutes at diploma level and other vocational schools at certificate level. The diploma level two-to-three year post high school course (post-Matriculation) was offered through technical and polytechnical institutes: and another pre-matriculation high school level course

was offered through vocational schools. The diploma level program for producing technicians and supervisors was beyond the scope of this study.

The high school level (certificate level) programmes included two courses: one designed to include a study period of one to two years for persons with basic qualification of VIII grade and another for one-and-a-half to two-and-a-half years course for persons who had completed VI grade.

In 1972, there were twenty-two vocational schools functioning under the Directorate of Technical Education. In addition, there were double shift trade programmes in thirteen places attached to Polytechnical Institutes. Under the Directorate of Technical Education, the annual admission capacity was 1600 for such courses including the double shift programmes. However, during the Pakistan rule, this Directorate had a plan to establish vocational schools for training skilled workers in every thana of East Pakistan (Bangladesh). In the Pakistan Fourth Five-Year Plan (1970-75), this Directorate had schemes to open sixty-three new vocational schools in different areas of East Pakistan (Bangladesh). These were planned but never implemented.

In addition to the vocational institutes established by the Directorate of Technical Education, there were some private institutions with poor physical facilities and teaching staff. These institutions, although in deplorable condition, showed a great enthusiasm, initiative and interest to build schools for formal education in vocational-technical fields. The Directorate of Technical Education

provided yearly financial grants to these institutes. But the government financial grants during Pakistan reign were inadequate to maintain a minimum acceptable standard. The report of a survey conducted by the Institute of Education and Research revealed that,

A total amount of nearly Rs. 70,000 was granted to thirty-five vocational institutions by the Directorate of Technical Education during the year 1967-68 ranging from Rs. 300.00 to 6300.00 as yearly grant-in-aid per institution. ... The duration of trade training ranges from one to five years. Among the trades weaving, tailoring and embroidery work are most common; trade courses in metal, wood, cane and bamboo work appear next in the frequency list; least frequently offered trade courses are typing, leatherwork, book-binding, clay modeling, coir weaving, and a few others. The largest number of students are reported to be enrolled in the area of weaving and tailoring (40:158).

Private vocational institutions in Bangladesh were very much neglected. Because of a lack of standard in private vocational schools and government vocational schools, no uniformity was maintained in the development of vocational education for skilled workers. As a result, the graduates from private vocational schools faced serious problems in the job market. No efforts were undertaken by the Directorate of Technical Education to standardize this level of vocational education.

There was an imbalance in the development of vocational-technical education under the Directorate of Technical Education. Efforts for developing vocational-technical education at the certificate level (high school level) were far less than the efforts for development which took place in the diploma level (post high school level). This can be seen from Table 4.1 which gives the figures of annual admission capacity, enrollment and output of skilled



workers, technicians or supervisors offered by the Directorate of Technical Education in Bangladesh.

Table 4.1

Admission Capacity, Enrollment and Output  
of the Two Levels of Education  
Administered by the Directorate  
of Technical Education During 1965-70

Year	Admission Capacity	Enrollment	Output
<b>Skilled Worker Level</b>			
1965-66	680	900	343
1966-67	680	1100	450
1967-68	900	1400	450
1968-69	1200	1800	850
1969-70	1600	2042	1000 (anticipated)
<b>Technician Level</b>			
1965-66	1860	3747	527
1966-67	1898	4309	437
1967-68	2597	4798	1060
1968-69	3468	6259	1300
1969-70	3800	8500	1400 (anticipated)

Source: Directorate of Technical Education, Government of Bangladesh.

The above table reveals the fact that there was an imbalance in the development of the two levels of education under the Directorate of Technical Education. The facilities for training skilled workers were expanded more rapidly than the facilities for preparation of technicians and supervisory cadre. Yet the total capacity for preparing technicians was greater than the capacity for preparation of skilled workers. In the pyramid of educational development, the base

ought to be stronger than the apex. In any development project, the demand for technicians and supervisors usually is less than the demand for skilled workers. Assuming a ratio of 1:5:20 between the engineers, technicians and skilled workers, more expansion at the skilled worker level was necessary. Moreover, the skilled worker is important because he is an important factor in influencing productivity. The development efforts for vocational-technical education under the Directorate of Technical Education was not in accord with the manpower requirements of Bangladesh.

The present development of vocational-technical education institutions under the Directorate of Technical Education has largely been organized on the basis of recommendations of the Commission on National Education in 1959-60. It was recommended that training facilities be provided for twenty-five new trades and technologies in addition to the existing courses, which they considered to be necessary for the developing economy of East Pakistan (Bangladesh). According to the survey conducted in 1969 by the Institute of Education and Research, Dacca, less than two-thirds of the areas of trades and technologies recommended by the Commission had been developed and introduced in the technical and vocational institutions of the then East Pakistan (40).

#### Directorate of Labour

The Directorate of Labour has general responsibility for the welfare of labourers. In addition to enforcement of government's labour laws and regulations, education for generating skilled manpower was one of the important responsibilities of this Directorate.

Educational programmes under this Directorate were very small. The Director of Labour with some deputy and assistant directors controlled some technical training centres under its jurisdiction. This Directorate had only five institutions for producing skilled workers with enrollment capacity of approximately 1540 persons. These institutes were: Technical Training Centre, Dacca; Vocational and Staff Training Centre, Chittagong; Technical Training Centre, Rajshahi; German--Bangladesh Technical Training Centre, Dacca; and Marine Diesel Training Centre, Narayanganj. The above institutions offered 18 month courses for groups of trainees; that is, when one group completed the course, another group was accepted. The Directorate of Labour had plans for further expansion of its programmes by establishing six additional Technical Training Centres for skilled workers.

The programme of on-the-job training and retraining facilities for the skilled workers apparently were completely neglected by the Directorate. The apprenticeship training programme which falls under the category of programs for skilled workers was under the control of the Directorate of Labour. As discussed earlier in Chapter III, the apprenticeship programme in Bangladesh was not very effective and the number of persons enrolled in training was very low. As observed by English of Syracuse University,

Proposals in the First and Second Plans for regulating, coordinating and standardizing in-service training and apprenticeship programs were never really implemented. Thus an inadequate ration of lower level skilled workers to high level technicians has developed (59:24).

In fact, Bangladesh appears to be like many other developing countries of the world where the higher levels of education have

grown faster than the lower levels. This faster growth in higher education was true in vocational-technical education as well as general education.

#### Directorate of Commerce and Industries

Similarly, the Directorate of Commerce and Industries had assumed a limited responsibility for training skilled manpower. In addition to trade, commerce and industrial development, education was one of the responsibilities of this Directorate. This Directorate had a small programme to train about 120 skilled workers each year. The Director of Commerce and Industries with his deputy and assistant directors controlled five weaving schools located in the districts of Mymensingh, Chittagong, Noakhahi, Pabna and Dinajpur. The Directorate had its jurisdiction and control over these five district weaving schools for skilled workers and one textile Institute in Dacca for producing supervisory level personnel.

#### An Integrated Analysis of the Programmes and the Administrative Structure

One of the major deficiencies of the system of vocational and technical education at the certificate level was that it was not systematically organized, and responsibilities were dispersed among so many agencies. Because of these reasons, types and standards varied widely and there was little comparability of qualification, nor were there adequate planned relationships between manpower requirements and amount of training carried out by various agencies. The Fourth Five-Year Plan described the situation in 1970 as,

Presently, there is no systematic pattern of training: some training is conducted in public corporations, a bit is done in private industry through apprenticeship programmes; vocational institutes exist here and there but generally have a small enrollment. In some cases skills are handed down from father to son. There is not even a standard classification of occupations yet established, hence, the content and depth of training for a given occupation varies from one plant to another from one institutions to another (84:159).

It is imperative to have close and effective coordination and cooperation among the different Directorates to avoid unnecessary duplication and to promote uniform progress. The weakness in the administrative structure as described in the proposals for educational policy of 1970 was, "Most of the responsibility probably falls on a too highly centralized and bureaucratic administration which does not allow full play to the talents and capabilities of the teachers, the students and the educational research workers (85:6)."

According to the survey report (1969) by Lyman there existed a contradiction between the Directorate of Technical Education and Directorate of Labour regarding responsibility and administrative control over these vocational-technical institutions. The survey report indicated that the Directorate of Technical Education claimed responsibility for all vocational-technical training should be under the Directorate's control; apprenticeship programme and other vocational training within industry should be retained by the Directorate of Labour. The main rationale for such claims was that vocational-technical education was pre-employment programmes and were to be integral parts of a national education system. On the other hand, the Directorate of Labour saw no justification to transfer administrative control of their Technical Training Centres to the Directorate of

Technical Education. According to the Directorate of Labour, the programmes under their control were more realistic in relation to industrial skill requirements, national manpower needs, interests of workers and other related questions in the context of employment, for which the Directorate of Labour had primary responsibility (43).

It is of utmost importance to realize that every department had a definite role towards the overall development of the nation and for accomplishing real progress through cooperation between the departments.

All directorates concerning vocational-technical education had their own expansion plans without consideration of expansion plans by the other directorates. The Directorate of Technical Education had a plan to establish vocational training centres in each thana of Bangladesh. In this regard Lyman commented in his survey report,

It would appear that the first priority should be re-orientation of the existing secondary school curricula to give them a substantial vocational bias before launching expensive expansion of facilities which may be unsuitable character. ... The cost of equipping such schools will be very high and the demands for teachers and craft instructors, already in serious shortage will be even more critical. A strictly limited number of such schools in rural areas and having courses with an agricultural or rural community bias for both boys and girls would appear to be the desirable approach to further expansion (43:17).

Contrary to this, the aims of the Directorate of Technical Education were to provide courses in thana vocational training centres to prepare students to enter industrial occupations for the modern sector, and to a great extent, overlooked the employment opportunities in the traditional rural sector. Establishment of vocational training institutions at the thana level with provision for

only industrial skills, were viewed by other writers as tending to further aggravate the flow of young people to already crowded urban areas.

The entrance requirements to these vocational training institutions included the completion of the eighth grade. Because of various reasons the dropout rates from primary schools were very high in Bangladesh. Between the first grade and eighth grade there was at least 60 percent dropout in rural areas mainly for economic reasons. Maybe if these youth were not allowed to drop out, older youth might find more work in rural areas. This vast mass of youth in rural areas has remained as unemployed with little or no preparation for employment. Evening courses for youth and adults to learn some type of simple craft and skill training to enable these people to find some useful activity in their rural environment, were not considered to be a part of vocational education systems in Bangladesh.

Another deficiency in the curricula of these vocational and technical institutions of certificate level was the limited emphasis on instruction in language and social science studies. One of the five year plans describes the situation,

The basic weakness in the entire programme of technical education has been the failure to perceive it as an integral part of the total educational effort. Technical education has been generally divorced from the rest of the educational system and has, therefore failed to produce the well-rounded, adaptable type of individual that is needed. Technical training must be based on the understanding that the human personality cannot be segmented and that the development of the individual as a worker, as a citizen, and as a person must be a part of the same educational process (79:346).

Prior to Bangladesh, the New Education Policy of 1970 proposed many reforms to overcome deficiencies of the existing system of vocational and technical education. It was proposed that vocational and technical education be reorganized in such a way that stages in technical-vocational education would be parallel with different stages of general education. The certificate courses should be renamed as Matriculation (Technical) and should be of two years duration after the eighth grade. The present three-year course after matriculation in a polytechnic institution should be replaced by a two-year course leading to an intermediate (technical) program, which would be followed by a further two year course leading to a B. Sc. (technical) degree. Similar programmes were proposed in the fields of agriculture and commerce (85).

#### Major Problems Faced by the Existing System of Vocational-Technical Education

##### Teacher Supply

The teacher plays a pivotal role in any system of education. A widely accepted truism is that the quality of education depends mainly upon teacher quality. Khan observed that,

In the ultimate analysis the teacher is the heart of any educational system and without his effort no progress in the field of education can ever be achieved. It is an admitted fact that the quality of teachers determines the quality of education and the effectiveness of the system (65:5).

But the magnitude of the problem of supply of trained teachers and other inputs for developing vocational-technical education was stated in the document of the Fourth Five-Year Plan (1970-75),



Most of the technical programmes have so far suffered from lack of qualified teaching staff and foreign exchange for the purchase of equipments and books. It is, therefore, essential that within the sub-sector of technical and vocational education, highest priority should be given to a substantial improvement in the training of teachers, including teachers of agriculture and of arts and crafts and technicians (84.147).

A qualified teacher is one of the most important pre-requisites for any quantitative and qualitative improvement of vocational-technical education system. An adequate supply of trained and qualified teachers in vocational-technical education was one of the greatest obstacles in expanding vocational-technical education in Bangladesh. The existing shortage of trained teachers in vocational-technical education was largely due to lack of adequate teacher training facilities.

According to Bari:

One of the greatest handicaps towards expansion of technical education has been the shortage of qualified teachers at all levels. To meet the demands for teachers at the polytechnic level, at technical teachers' training college has been established in Dacca (94:10).

As mentioned earlier the polytechnic level (post-secondary) was developing faster than that of secondary level. For the polytechnic level at least one teachers' training college was established. But no training institution was established by the Directorate of Technical Education to meet the demand for teachers in the vocational training institutes under this directorate. Most of the training posts in these institutes were vacant and the number of vacancies in such institutions were constantly on the increase. However, the Directorate of Technical Education had a plan to start six colleges for training of vocational teachers.

The following table gives the estimate of teachers needed in the training institutes under the Directorate of Technical Education, during 1970-75 period.

Table 4.2

Projection of Teacher Requirement for  
Vocational Training Institutes During  
1970-75

	Total Requirement of Teacher (estimated)	Existing Stock of Teachers (untrained)	Number of Teachers Trained	Additional to be trained
Instructor (teacher)	2193	244	21	2172

Source: Directorate of Technical Education, Bangladesh.

It appears from the above table that about 2193 teachers would be required for vocational training institutes and the existing stock of teachers was 244, of which only 21 teachers had received training.

Facilities for training teachers of vocational and technical education under the Directorate of Labour were not adequate to meet the demand. Under this directorate, there were only two teacher training units attached to the Technical Training Centres: one at Chittagong with a capacity to train 25 teachers per year, and another attached to Technical Training Centre, Dacca, with a capacity of about 30 teachers per year.

Lohman, in his evaluation report on technical education in East Pakistan (Bangladesh) indicated in 1968 that the quality of technical education programmes and the quality of the graduates was seriously

affected by the lack of trained teachers. A secondary cause was lack of equipment (102).

Hamm, identified that, "The most serious obstacle to the further expansion of technical education in East Pakistan (Bangladesh) is the shortage of trained persons to staff the technical schools (101:5)."

According to the findings from the Lyman survey on vocational and technical education in East Pakistan (Bangladesh), "They (technical institutions) all shared one thing in common--a shortage of qualified, well trained teaching and instructional staff and most lacked adequate supplies of equipment and training materials (43:28)."

Teacher-supply was equally dismal under the Directorate of Public Instruction. Diversified vocational-technical courses offered by the Multilateral high schools under the Directorate of Public Instruction also suffered due to a serious shortage of trained and qualified teachers. As observed by English of Syracuse University, regarding diversified programmes of secondary schools in Bangladesh,

Another serious problem of the secondary level is the lack of a diversified curriculum. While more electives have been added in practical, technical and scientific subjects, secondary education is still mainly general education, especially due to lack of equipment and qualified teachers for the new subjects (59:18-19).

A USAID study paper on education in Bangladesh indicated,

The most important single factor on which the success of the new program in secondary education will depend is the supply of qualified teachers. Experience since the launching of this program indicated that availability of human resources posed as great a problem as that of material resources. The greatest obstacle in the way of proper implementation of the educational program was the inadequate supply of qualified teachers. This was most pronounced in science and technical subjects like agriculture and industrial arts (105:26).

Very few steps had been taken to cope with the problem of inadequacy in the supply of trained teachers which was considered to be the number one limiting factor for expansion of vocational courses in the multilateral high schools of Bangladesh. There were five teacher training colleges for the preparation of secondary school teachers under the Directorate of Public Instruction. But no provision was made in those teacher training colleges for the preparation of teachers in diversified vocational-technical courses offered in the multilateral high school. As observed by Sharefuddin,

One of the most important recent innovations in the pattern of secondary education has been the diversification of courses--emphasizing such practical subjects in the general schools as science, agriculture, industrial arts, commercial subjects, home economics, arts and crafts, etc. But the curriculum of the general (teacher's) training colleges does not reflect this emphasis. Each student in a (teacher's) training college is required to specialize in two school subjects; these options are still limited to the "traditional" subjects, such as language, history, geography, mathematics, science, etc. ... one of the stumbling blocks in the rapid introduction of a diversified curriculum has certainly been the shortage of properly qualified teachers (70:24-25).

The critical shortage of trained teachers was also reported by Selim, "There is a wide gap between the number of trained teachers required for various types of schools and the number of teachers actually being produced by the existing training institutions (72:54)."

To meet the problem of inadequacy in the supply of trained teachers for vocational-technical courses in the multilateral schools, the Education Extension Centre, Dacca, offered a few long courses of nine months duration, in collaboration with other institutions. From

July, 1959 to June, 1970, it organized and conducted eight long courses for agriculture teachers, two long courses for industrial arts teachers and two long courses for commerce teachers in which there were in all 101, 8 and 18 participants, respectively. The number of teachers trained by the Education Extension Centre was very negligible compared to the vast requirements for implementing diversified programmes in the high schools.

Since 1967-68, the Institute of Education and Research under the University of Dacca, introduced a two-year undergraduate programme leading to the B. Sc. degree in industrial arts. This programme was established to meet the demand for industrial arts teachers. This institute also offered a similar two-year programme in business education to produce commerce teachers. But the number of teachers produced by this Institute in the area of industrial arts and commerce was very small in comparison to the need for teachers in these fields. Regarding inadequacy of existing facilities for teacher education, Ahmed observed,

The present training facilities have failed to meet even the current demands as indicated by the huge proportion of untrained teachers. If the future demands are to be met, the number of these professional institutions have to be doubled immediately and then this rate of multiplication has to continue every five years or so for several decades. It is doubtful if the limited resources available for education will permit this rate of expansion (56:90).

It is evident from the above statement that teacher preparation which would play a great role in the implementation of huge programmes by different directorates would pose a difficult problem. The limited resources of Bangladesh was viewed as probably the greatest obstacle to overcome.

### Physical Facilities

Physical facilities including specialized equipment and laboratory-shop facilities, are a prerequisite for any development of vocational and technical education. But most of the schools in Bangladesh, offering vocational-technical courses suffered from inadequacy of such facilities. Non-availability of specialized equipment and inadequate shop-laboratory facilities were another major bottleneck in the expansion of vocational-technical education in Bangladesh.

It is an accepted truism that vocational and technical education suffers when it is not adequately supported by sufficient funds to build modern shop-laboratories and classrooms as well as to buy up-to-date equipment and supplies. Insufficient funds in most of the ordinary schools of Bangladesh presented a serious problem for offering vocational-technical education facilities available in Bangladesh.

According to a report of the heads of multilateral high schools in a study conference held at Education Extension Centre, Dacca, in 1966,

All the schools are short of classrooms, some have only one laboratory, some have no workshop, some have no commerce room or geometrical and technical drawing rooms. ... Some of the schools have not yet been provided with the tools and equipment they need (61:15).

It is evident that lack of physical facilities on the part of many schools resulted in insufficient vocational-technical education programmes. As observed by Ali,

Science libraries and laboratories are rare, and those that exist are neither well equipped nor well maintained. In some schools, even Dacca city, the limited laboratory equipment which is available is not for use by the students, but is stored in a show case. Laboratory work, even where performed, is done without any real purpose (57:80-81).

The report of the educational equipment survey of 1967 (in Bangladesh) indicated that facilities for teaching science and vocational subjects in most of the schools were inadequate. According to the report, sixty-five percent of the schools under survey had no electricity; 89 percent of the rural schools and 77 percent of the urban schools had no supply of running water. Gas supply was non-existent in almost all school laboratories. About 17 percent of the rural and 12 percent of the urban schools had no laboratories at all. Most of the schools were under-equipped and some schools offered science subjects without having any equipment for those subjects (98).

In a symposium of scientists, held at Dacca in 1968, Ahmed, described the lamentable condition of science laboratories at all levels of education in Bangladesh,

Actually what we call laboratories in our schools and colleges and in our universities where our boys get their first lessons in experimental science is a misnomer. They are almost outdated by a hundred years. They are ill-equipped to a degree which stands no comparison (58:2).

Similar views expressed by Sharafuddin, "After the problem of teachers comes the dearth of laboratory, equipment, furniture, textbook and other materials. There is no doubt that these facilities are in very short supply (71:7)."

All the above findings and statements indicated that programmes of vocational and technical education in Bangladesh were suffering due to lack of adequate facilities of shop-laboratory, equipment and classrooms. But the provision for such facilities for developing vocational-technical education in the individual schools of Bangladesh would be a tremendous burden in the existing economy of the country.

### Student Enrollment

Emphasis on general education in Bangladesh is a legacy of the pre-independence past. It evolved under an alien rule chiefly to help staff the governmental bureaucracy and provided little scope either to develop the talent potentials of leadership or take advantage of a scientifically and technologically advancing world. Technical and vocational education in Bangladesh has been traditionally regarded as separate from the main educational system and relegated to an inferior position since it does not lead to the most sought-after careers. This attitudinal problem was identified as being primarily responsible for the high rate of enrollment in general education compared to vocational and technical education at the secondary level of Bangladesh. According to a report of United Nations manpower project in 1967,

In 1964 per every 1000 pupils/students enrolled in educational institutions in Pakistan only 4 pupils are enrolled in technical institutions whereas in general secondary schools about 196 pupils. Corresponding figures for East Pakistan (Bangladesh) and West Pakistan are respectively: 2 and 154 pupils and 7 and 251 pupils (41:63).

It is evident from the above figures that a large proportion of student population in Bangladesh had a tendency to pursue general



education. However, on the basis of the recommendations of the Commission on National Education (1959-60), diversified programmes of vocational-technical education were introduced at the secondary high schools of Bangladesh in 1961. But the enrollment figures in vocational-technical courses were extremely poor and look almost incredible. Data in Table 4.3 give the general picture of the enrollment situation in different types of high schools in Bangladesh during the year 1967-68. More recently, the New Education Policy of 1970, recommended a massive shift in education policy to promote vocational and technical-oriented education at the secondary stage and to make this instruction available in the ordinary high schools where students can enroll for Matric (technical).

It can be observed from Table 4.3 that a large number of students at the secondary level were enrolled in the humanities curriculum. This situation in Bangladesh may have been due in part to the total absence of guidance and counseling services at the secondary level. The choice of courses of study by students was mainly dictated by unrealistic ambitions of parents or other considerations rather than considering national need and student's own endowments, capabilities and interests.

The main evidence of failure of the education system at the secondary level in Bangladesh, was its students who lacked gainful skills appropriate for employment related to economic development of the country. The flow of graduates did not satisfactorily fit the needs in those required fields which created a double barrel problem of unemployment for many and lack of manpower for developing a new

Table 4.3

Enrollment According to Curricula in the Different High Schools  
(Grade IX and X) of Bangladesh in the Year 1967-68

Type of School	Curricula					Total
	Humanities	Science	Commerce	Agriculture	Industrial Arts	Economics
Multilateral High Schools	26,360	10,920	2956	551	450	511
						41,748
Bilateral High Schools	68,920	21,619	5230		295	325
						95,449
General High Schools	145,754	11,451	1731			
						159,025
	241,034	44,080	9969	551	746	836
						297,214

Source: B.E.I.S. Education Directorate, Government of Bangladesh, Dacca.

field or enterprise. As observed by a foreign advisor attached to the Education Extension Centre, Dacca,

Any nation that wants to meet the challenges of the complex and dynamic society must have a guidance service in its schools. Pakistan (Bangladesh) is a developing nation and the new educational programme and the nation must develop together (75:31).

The need for guidance and counseling services in the educational system of Bangladesh was recognized in 1959 by the Commission on National Education. One decade passed but nothing, or very little, was done in this direction. As stated in the report of the Commission,

We suggest the appointment of a staff member at all secondary and vocational schools as a careers officer. This teacher should have a wide knowledge of career opportunities and the prospects offered by particular vocations as well as an intimate knowledge of courses of study available in preparation for these. ... It seems to us that the introduction of such provisions is a necessary corollary to the full utilization of the programme of technical and vocational education we are proposing (32: 134 and 161).

This was also recognized in the Third Five-Year Plan (1965-70) but without any implementation. It was stated in the document,

A very important feature of all these programmes, whose keynote is diversity and choice, is the development of an effective guidance system to assist children in making suitable decisions at the time of electing subjects for study or seeking openings for employment. This guidance and counseling programme will be based on the use of standardized tests of intelligence, interest and aptitudes of children and young people at different ages and class level (82:193).

It was, therefore, evident in the context of enrollment situation at the secondary level of Bangladesh, that there existed a wastage of human talent and national resources in education.

Recommendations were made in an effort to substantially reduce the wastage through a properly administered guidance and counseling programme.

## CHAPTER V

### DEVELOPMENT OF AN ALTERNATIVE SYSTEM OF VOCATIONAL EDUCATION FOR BANGLADESH

#### Introduction

On the basis of the analyses in the earlier chapters it is evident that the existing circumstances in Bangladesh calls for an alternative system of education. Various national educational groups and commissions have recognized the importance of vocational-technical education as a function of public education to provide the means for developing saleable skills, understandings and attitudes necessary to make the citizens intelligent and productive participants in the society. But the present system of education is dominated by general education which has failed to contribute as much as is desired for the socio-economic development of the country and to help individuals develop fully. There is a need for resolution of the problems of providing educational programmes that will form a bridge between man and his work, and will help in socio-economic development of the country. One possible solution is to develop an alternative system of education emphasizing vocational-technical education, best suited to the conditions and requirements of Bangladesh.

#### Alternative System

On the basis of the survey of the documents it can be said that there is a need for reorganization of the existing system of education.

Also nearly all of the documents acknowledged the needs for reorientation of education to place greater emphasis on vocational-technical education and training in order to make the education more useful and to meet the manpower needs of national development. The basic concept underlying the goals and guidelines of educational development as outlined in the New Education Policy of 1970, were, "Re-orientation of educational programmes in the light of the economic needs of the society particularly by shifting the emphasis to scientific, technical and vocational education (86:1)."

This increase in emphasis on vocational-technical education at the secondary level should be such as to achieve an enrollment ratio of 40:60 between the general arts programme on the one hand and the vocational-technical programmes on the other. According to the document, "The emphasis in secondary education should be shifted to science, technical and vocational education so as to achieve a ratio of 40:60 between the general stream on the one hand and the science, technical and vocational streams on the other (86:6)."

The proposed massive shift towards science, technical and vocational education at the secondary level was not necessarily based only on the manpower requirement approach to education, but to create a better trained citizenry in the country. According to the proposals of the New Education Policy,

What is required in the next ten years is not the 'requirement approach' to vocational and technical education but an approach which would create a supply of a self-reliant class of skilled and semi-skilled technicians in different technologies of importance to the national economy. It should be realized that such a class of trained technicians would generate its own employment potential and would not necessarily be job seekers (85:23).

It was evident from the above mentioned statements that leaders in government supported recommendations for developing science, vocational and technical education in the country. But various problems (discussed in Chapter IV) were identified with the attempts to implement vocational-technical education programmes in the high schools. However, emphasis on educational development indicated in the Third Five-Year Plan (1965-1970),

Abridgement of the developmental gap between urban and rural communities is important for the overall educational development of the nation. The pronounced hiatus between their respective facilities for education and consequent supply of skilled persons has to be closed (82:211).

Further, the policy of the government recommended in the Fourth Plan (1970-75) was,

Existing secondary schools need to be renovated and strengthened appropriately and further expansion properly planned. As an urgent measure it is necessary to vocationalize a majority of secondary schools both in rural and urban areas by establishing optimum size institutions which would be more economical and efficient (84:155-156).

In this direction, the New Education Policy of 1970, recommended "Considering the constraints imposed by the limited resources and the expensiveness of science education, it will be desirable to develop centres of excellence in selected places which should be open to all on the basis of ability and aptitude (86:12)."

The same document also indicated the need for detailed plans and programmes for educational development in the country. In the words of the document,

The New Education Policy has, therefore, been finally designed as a statement of national goals in education, and some broad-based guidelines. The goals indicate the general directions that educational development in the country should follow, and guidelines provide a framework within which the provincial governments and other governments and non-governmental agencies are to prepare detailed plans and programmes (86:1).

The concept of Comilla-type thana training and development centres for adult functional education was widely accepted by the government, particularly for rural development. It was recommended in the outlines of the Third Five-Year Plan,

Thana/Tehsil Training and Development Centres should be established all over the country to organize comprehensive training in administration and skills and servicing and coordinating the activities of the cooperative village units (80:232).

Accordingly, in almost all thanas in Bangladesh, thana training and development centres were set up by the Department of Basic Democracies and local government in collaboration with other departments.

The tempo of thana-based development continued and the Directorate of Technical Education also undertook a plan to establish one vocational training centre in each thana of Bangladesh. According to the Fourth Five-Year Plan (1970-1975),

In East Pakistan (Bangladesh), there is already underway a programme to establish a vocational high school in each thana. By the end of the Third Plan, it is expected that 35 of these schools will be admitting students. During the Fourth Plan, it is intended to open an additional 145 vocational high schools (84:160).

The existing training institutions at the thana level were not concerned with the vocational education of high school youth. However, the government's more recent policy has emphasized a massive shift towards



vocational-technical education at the secondary level. It was recommended that, "vocational and technical training should be made available in the ordinary high schools (85:23)." To implement this policy, many resources such as teachers, equipment, shop-laboratories, supplies and money would be required.

In keeping with the above mentioned goals and recommendations, it may be possible to offer an alternative system of education which might solve some of the major problems faced by the existing system. The concepts of the proposed alternative system may be presented under the name, "Thana Vocational-Technical Education Programmes". The system would be operated by establishing some vocational-technical centres on a thana basis.

Under the proposed system of thana vocational-technical education programmes, all the existing training institutions at the thana level would merge into one.

The proposed thana vocational-technical centres, in addition to providing instruction for adults and out-of-school youth, would also assume responsibility for high school youth. In other words, in addition to other functions, these thana centres would offer education at the secondary level in vocational-technical fields to students in the geographical territory of a thana.

The proposed thana vocational-technical centres would be the focal point of the total vocational-technical education effort in that thana by the schools and other government agencies. These thana centres would offer instruction to all kinds of youth and adults in a wide variety of occupational areas. The centres would seek to

provide the courses necessary to prepare everyone for potential success in at least one vocation. This concept of centralizing the instruction was also recognized in the First Five-Year Plan of Bangladesh (90).

Close involvement of local communities with the centres, as recommended in the government policy, appears to be more feasible when the development unit is at the thana level, the lowest unit of government's direct administration. It is recommended that,

Close involvement of local communities with schools is of great educational significance. The concept of educational administration will be reviewed and the present system of management of educational institutions replaced by a more democratic decentralized administration (84:150).

Also, the existing disparity of educational facilities between rural and urban areas would be reduced to a great extent, if the governmental unit for development were closest to the grassroot level. The proposed thana centres would be evenly distributed throughout thanas of Bangladesh, which would cover both rural and urban areas.

The location of each thana centre should be, insofar as possible at the geographical centre of a thana. This would facilitate the sharing of the facilities by the high schools of the thana. The students from the participating schools would retain their identity with their own schools from which they would receive their general education. They would graduate from their home schools.

As discussed in Chapter IV it is beyond the capacity of the small private schools to offer vocational-technical courses. The small private high schools with inadequate facilities for vocational education programs would also share the facilities of thana centres to gain maximum utilization of the comprehensive programme and facilities.

In other words, the proposed system would serve as a centralized extension for existing schools to achieve the government policy of massive shift toward vocational technical education.

The concept of sharing is explained in the document of the Third Five-Year Plan,

Some projection apparatus is costly, but one film or film-strip projector or overhead projector can be used by many schools jointly. Similarly one film library well stocked with appropriate films, filmstrips, slides, etc., can serve a whole series of schools and colleges (82:21).

However, for participating in the thana vocational-technical education programmes, students of participating schools need to be transported to thana centres. This might be by half day or other block time arrangements fitting local schedules, distance and other factors. The idea was also recognized in the First Five-Year Plan of Bangladesh (90).

The provision of other facilities in the thana centres for providing vocational-technical education would, no doubt, depend upon the available resources of the country. But nevertheless, it would be less expensive to provide one or two "centres" with adequate facilities instead of developing many individual small schools in a thana. However, it was proposed in the Third Five-Year Plan, that,

The district high school will be the focal centre of this development. It should be designed to be fully comprehensive, with adequate residential facilities, offering the widest possible choices in the elective subjects. ...fully equipped with laboratories, library, science equipment, workshops, apparatus, machinery, other teaching aids and qualified teachers, thus serving as a model for other high schools in the district and drawing resident students from the areas where particular electives are not available (82:192).

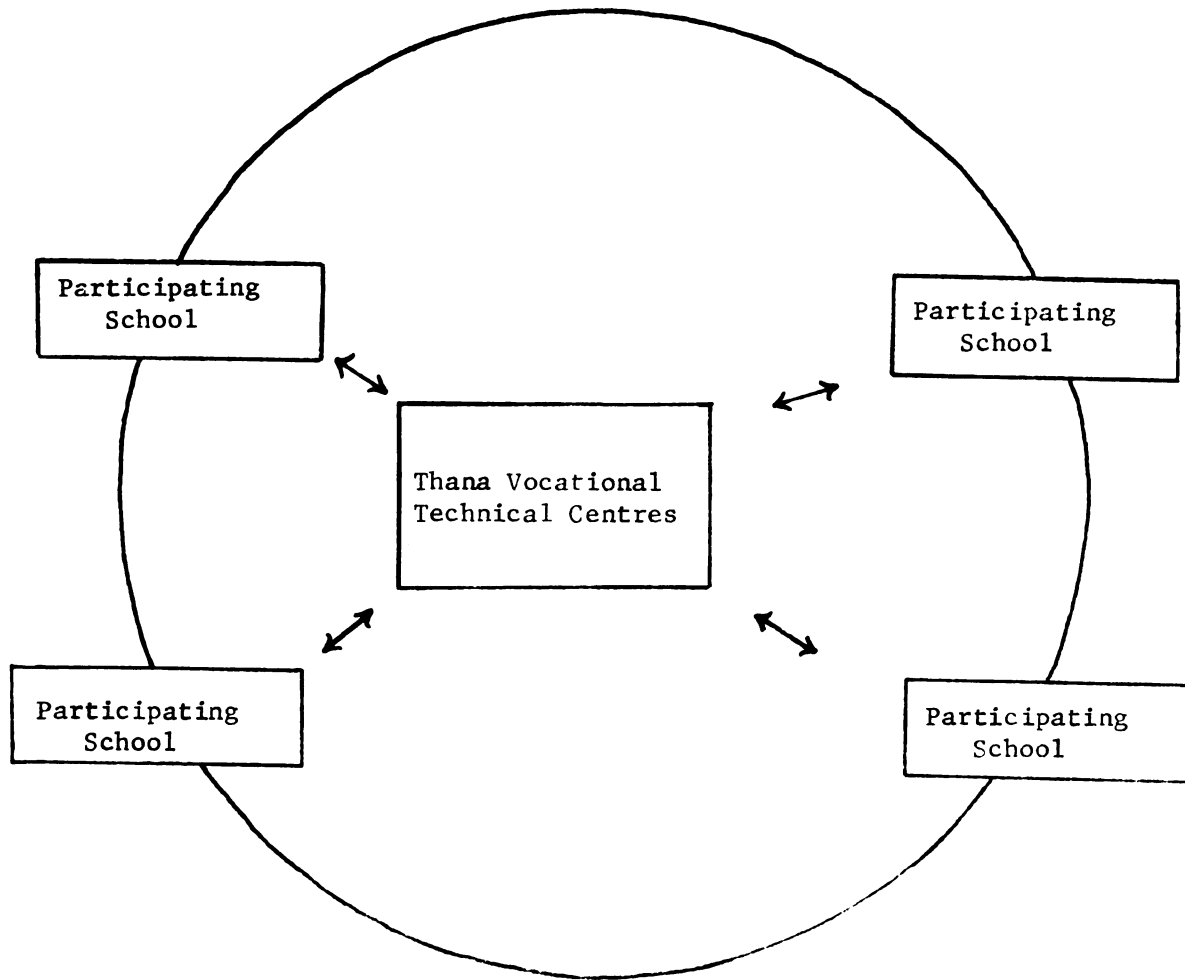


Figure 5.1

Visualization of the Proposed System

But the development of district schools, generally located in urban areas did not solve the problems of education in rural areas where eighty percent of the people lived. This approach to development was viewed as creating more disparity between urban and rural educational facilities. Therefore, the development approach at the Thana--the lowest administrative unit of the government would be a better approach than district plan in the attempt to maintain equity of development.

The existing television facilities in Bangladesh may be used in the proposed system of thana vocational-technical education programme. It was also recommended in the various documents to utilize TV in the educational programmes. In the New Education Policy of 1970 it was recommended that, "For a general improvement of the teaching of science and technical subjects the mass-communication media, particularly, the television and radio should be effectively utilized (86:6)."

In the Fourth Five-Year Plan, "Educational T.V. in Pakistan (Bangladesh) may certainly supplement the teaching programmes at the secondary and higher level (84:168)."

In the Third Five-Year Plan, "As outstanding teachers are in short supply especially in the field of science and technology, TV can spread their benefit far and wide if educational programmes are efficiently used (82:210)."

In the context of the above recommendations, it was believed that problems of teacher shortage could be minimized by using television in the programme. Some of the lectures emphasizing theories

and demonstrations could be given at the thana centres and then received at the home schools by television. A combination of instruction by telecommunications at the home schools and hands on experiences of shop-laboratories at the thana centre would also minimize the frequency of student's transportation.

Additional details about implementing these proposed thana vocational-technical education programmes are given in the Appendix A. If the centres were to serve ten percent of unemployed adults and out-of-school youth; and sixty percent of high school youth, the requirements of the total number of thana centres would be 877 with the capacity of 1000 participants per centre. Commuting distance for participation of high school youth would be within seven miles.

A separate programme is proposed in Appendix B for Chittagong Hill Tracts district where thana programmes cannot be justified due to sparse distribution of population within a large area.

### Rationale of the Proposed System

The rationale of the proposed system has been discussed from two points of view: (1) thana as a unit, and (2) feasibility of the proposed system.

#### Thana as a Unit

A thana as the main focus of the proposed system of education is consistent with the development plans of Bangladesh. Recent plans for development are all thana based and the concept of a thana as a unit of development is gaining more acceptance than ever before. Moreover, experiments at Comilla demonstrated that a thana is a most

effective unit for development, particularly for rural development.

According to the Fourth Five-Year Plan,

A major problem in implementation of the programme during the Third Plan was the lack of technical personnel at the local level. A comprehensive training programme to impart the necessary skills to the people in rural areas is, therefore, to be developed. In East Pakistan (Bangladesh) increasing arrangements for training of local workers were made through Thana Training and Development Centres and through workshops established under the thana irrigation programme. This effort has to be further intensified and more closely linked with the training programme in the Pakistan (Bangladesh) Academy for Rural Development in Comilla (84:349).

Further, the Fourth Plan recognized that,

The Comilla approach has been tested outside its laboratory area--the Comilla Kotwali Thana. It is producing satisfactory results in groups of thanas in the districts of Comilla, Chittagong and Dinajpur and in four agricultural estates established by EPADC (84:345).

Another new dimension of a successful thana based programme is the "thana irrigation programme" in Bangladesh. According to the Fourth Five-Year Plan,

The thana irrigation Programme is the single most successful irrigation programme that has been launched in the province (Bangladesh). ... Maximum advantage will be taken of this success in the Fourth Plan period and the Thana Irrigation Programme will be expanded as rapidly as possible (84:342).

The programme focused on the thana level, where effective programme planning, implementation, better supervision and close involvement of people were possible. According to Ahmed,

In the recent past some solution to this problem has been sought through improving the organization at the thana level. ...In the context of the development need of Bangladesh the center of administrative guidance and power equivalent to that of the existing district should be relocated at the thana level ...(92:4).

However, the following rationale is given in support of the proposed thana based programme.

1. A thana in Bangladesh is the lowest unit of government's direct administration so equity of educational development in rural as well as urban areas is more conveniently possible.

2. Thana level officers, service and supply facilities of government's technical agencies for development work available at the thana headquarters, all can be efficiently utilized in the proposed system. Different departments of the government can afford to assign an officer with skill and experience to it. When there is a critical shortage of trained personnel, the possibility of finding 413 well-qualified officers for assignment to the thanas is much more likely than finding 4000 workers for the union level, or 45,000 for assignment to the village-level.

3. Thanas are sufficiently small that a broad spectrum of the people of the area can participate in thana activities and identify with its work.

4. The thana headquarters is the established unit of economic and commercial activities. It is also the location of commercial services and supply outlets and centre of transportation of the area.

5. Rural areas of Bangladesh which have been neglected and undeveloped can be reached through a thana more readily than from higher units.

6. Government's Rural Works Programme which is designed to implement labour intensive construction projects essential in increasing



rural productivity may be more effective if it is supported by a comprehensive educational plan at the thana level as proposed.

### Feasibility of the Proposed System

At present, there are two major types of training institutions available at the thana level: (1) Comilla type thana training and development centre, and (2) vocational training institutes by the Directorate of Technical Education.

Comilla type thana training and development centres do not serve as a comprehensive vocational training programme for different groups such as, high school youth, out-of-school youth and adults. The Comilla type programme only partially covers the adult group in an indirect manner and in the areas related to the implementation of government's rural works programmes and agriculture. Only the village leaders or the key men of the village have the direct access to this training,

The method suggested was for each village group to select its representative, called the 'organizer' who would serve as fiscal agent and learner-trainer. Soon thereafter one or two alert farmers and early adopters would be selected as 'model farmers'.

A training method would follow logically from the above in which the organizers and model farmers would come to the Academy for weekly training sessions, followed by village meetings where the ideas learned would constitute the 'lessons' for the villagers (19:46-47).

The second type of training institute at the thana level is called a vocational training institute under the Directorate of Technical Education. It offers vocational-technical courses below secondary level for youth. This training programme is a duplication of training facilities which the Directorate of Labour is also offering

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and expanding under a different name. However, these vocational training institutes at the thana level are not designed to include the high school youth, whereas the government aims at a massive shift toward vocational-technical education for high school youth. According to the Fourth Five-Year Plan, "In secondary education the Fourth Plan objective will be to achieve an enrollment ratio of 40:60 between the arts programmes and the scientific, technical and vocational programmes (84:155)."

This type of massive shift in educational practice towards vocational-technical education at the secondary level is no doubt an ambitious plan. But the resources required in terms of teaching staff, workshops, laboratories, equipment, and supplies for these programmes of vocational-technical education are rather large while the available resources are very limited. The question of specialized equipment, laboratory facilities, and teachers would become a great barrier to expansion of vocational-technical courses in individual schools. It is, therefore, desirable that all the existing training institutes at the thana level such as a thana training and development centre, and a vocational training institute at the thana level and other training efforts by different departments of the government should merge into one, in the light of the proposed system. Thus, in addition to serving adult and out-of-school youth, they would also serve the high school youth. According to the Fourth Five-Year Plan,

High level research activities will be organized to conduct analytical studies of educational problems. Applied research will open the way to the establishment of a more geographically decentralized educational system, under which schools and training programmes will be functionally related to local demands for services and to local patterns of employment, migration and community life generally. It is, therefore, imperative to develop a strong research programme which may be helpful in cutting down the overall cost of the education programme and increasing the effectiveness of the educational investment (84:149).

The proposed system of thana centre is believed to be one way of reducing the educational expenditure required to implement vocational education in a geographically decentralized way.

Due to lack of resources, secondary schools commonly find it difficult to provide various vocational-technical programmes. The major problems facing these high schools in their attempt to provide vocational-technical education were discussed in Chapter IV. The situation faced by small schools and their resultant inability to provide vocational-technical programmes may be at least partially solved by the proposed system of thana centres. It is viewed as a constructive approach to the solution of the problems of insufficient funds, shortage of teachers and low enrollment in vocational-technical courses.

Raper described one of the reasons for success of the Comilla approach as, "With the creation of the thana training and Development Center all of the thana representatives of the various government departments concerned with development were brought together in one location for the first time ...(19:14)."

The proposed system is also consistent with this approach that thana centres would provide the centralized place for the total

educational effort of that thana, where all the government representatives at the thana level would be attached to this programme. The proposed system of thana centres is also consistent with the government policy of central laboratories and community workshops as recommended in the First Five-Year Plan of Bangladesh (90).

However, in addition to other factors discussed, the following rationale is given in support of the feasibility of the proposed system.

1. The proposed system would provide vocational-technical education for high school youth of Bangladesh which is one of the major goals proposed in the recent educational policies. This approach would be cheaper than that of an effort to launch expensive vocational-technical education in individual schools.

2. Within limited resources of the government, it is economically more feasible to remodel the existing institutions or to create a few institutions, where necessary, in order to include the high school youth. This approach would offer solutions to the problems of vocational education for both youth and adults in Bangladesh.

3. The developmental gap between urban and rural educational facilities as proposed in the various documents may be reduced to a great extent by implementing the proposed system of thana centres.

4. A higher degree of involvement of local people and communities with the vocational-technical education centres would be possible through the proposed thana centres.

5. The proposed system would reduce the unregulated expansion of training efforts of different departments offering almost similar programmes. The system would eliminate unnecessary duplication of



training efforts by different departments of the government in the same thana and thereby, reduce the expenditures for equipment, service and supplies.

6. Under the proposed system, it should be possible to offer a greater number of curricula to fit different needs, abilities and interests of the people. A more extensive programme of occupational training opportunities, both for youth and adults, would be available.

7. It will offer training opportunities in more geographical areas to more persons than is possible in individual schools serving single communities.

8. The thana vocational-technical centre as a single administrative unit would serve multipurpose functions, whereas these functions are at present haphazardly served by several different administrative units or organizations.

#### Basic Programmes of the Proposed Thana Vocational Technical Centres

The thana vocational-technical centres would operate throughout the year with an enrollment capacity of 1000 per centre. Each centre would be open to all who want, need, and can profit from occupational preparation. It would be responsive to the needs of youth and adults but also be in tune to the manpower needs of Bangladesh. The thana centre would offer both full-time as well as part time, day and evening courses. A high degree of flexibility would be maintained in order to serve youth and adults to pursue their studies according to their inclinations. Since the need for vocational education is different for different groups of persons, the curriculum pattern for youth and adults has been discussed separately. However, the thana vocational-

technical centres would operate the following programme areas:  
secondary, pre-vocational, out-of-school youth, adult, guidance and  
counseling, work experience, instructional development, teacher education,  
research and coordination.

#### Secondary School Programme

As shown in Chapter IV, most of the high schools cannot offer vocational-technical courses. Lack of resources constitute one of the major obstacles for introducing vocational-technical education in high schools. One of the alternative solutions for such problems would be through proposed thana centres.

The thana centres would offer instruction for grade IX and X to prepare students for matriculation in different vocational-technical subjects. The students of the participating schools would receive general education at their respective home schools. The programme of the thana centres would be intended for occupational preparation and at the same time would be useful for those students who desire to continue their education in technical, semi-professional and professional programmes.

#### Pre-Vocational Education

Certain prerequisites for vocational-technical education at the thana centre would be provided through a pre-vocational programme during grades VI to VIII at the home schools. The importance of such programmes were recognized in the Fourth Five-Year Plan, "Pre-vocational courses imparting basic knowledge of crops and crop storage, agricultural equipments, soils, seeds, rural carpentry, first-aid and nutrition will be provided as a part of the course (84:156)."



Development of pre-vocational courses would be an important part for the proper implementation of high school vocational programmes through thana centres. This part is the foundation and pre-requisite for participating in the thana centres. Therefore, it is necessary that thana centres should provide coordination, guidance and counseling services and other necessary services to the participating schools for developing pre-vocational programmes. The thana centres should take an active role in developing materials for orientation of students in pre-vocational preparation at the participating schools. In all, a thana centre would assume the responsibility of assisting students of the participating schools in developing self-concepts in the world of work and preparatory backgrounds for the thana centers.

#### Out-of-School Youth Programme

Out-of-school youth are those who are of high school age but have dropped out of school prior to completion. Many have dropped out due to economic reasons. Although these young people have ceased or interrupted their secondary education many have time available for full-time education before seeking work. However, school dropouts are one of the major educational problems in Bangladesh. The dropout youth with no saleable skills are a great economic burden to Bangladesh. With adequate training these young people could be an asset to the society rather than a liability. However, special effort should be made by the participating schools to recruit or re-enroll these youth so that they can complete their high school education. To achieve this plan would take much time in Bangladesh. At present, the rate of dropout is so high that it is almost beyond the ability of the

participating schools to manage. There is practically, a fifty percent dropout between the first and second years of primary school and it is reasonable to assume that for some years to come, a substantial portion of youth will not be able to go beyond 6th or 7th grade for mainly economic reasons. Therefore, the second approach for these out-of-school youth would be for the thana centres to offer courses to provide some type of training involving use of hand tools, which will enable the dropouts to become semi-skilled workers or self-employed artisans.

#### Adult Programme

As discussed in Chapter III, the lack of training facilities for adults is one of the major problems in Bangladesh. Most of the farmers in the rural areas and workers in urban areas are illiterate, have had no opportunity for any occupational training, and do not apply the techniques which could greatly improve their productivity and standard of living. Therefore, one of the main purposes of thana centres would be to offer various training programmes to provide these adults with the skills needed to be absorbed in the developing economy of Bangladesh. This programme should explore the potential for self-employment of adults; offer training either part-time or full-time and make it available during both day and evening hours; and have no entrance requirements and nature of courses would vary from course to course according to the needs of the adult participants. These variation and flexibility in adult courses are necessary because some adults will need preparatory training, whereas some may need upgrading, retraining, or resettlement. At the same time, some adults in the rural areas where there is no industry, will need some type of

simple craft and skill training involving use of hand tools which will enable these people to find some useful activities in their rural environment.

### Guidance and Counseling Services

Providing opportunity for vocational-technical education would have no meaning if it was not sufficiently used by the people. The government policy designed to reduce the proportion of students in general studies and to increase the proportion in vocational-technical education would be difficult without guidance and counseling services. As discussed in Chapter IV the choice of courses of study is mostly dictated by expectations of parents for their children rather than considering national needs or the student's own endowments, capabilities and interests. The need for guidance and counseling services has been recognized in the various documents of the government.

New Education Policy of 1970 recommended, "The new approach to the development of technical and vocational education in Pakistan (Bangladesh) will necessitate, (a) creation of a full-time counseling and guidance service at various levels (86:11)."

Fourth Plan recommended, "Orientation and development of curricula towards scientific, technical and vocational education as well as services such as guidance and counseling for directing students to the courses according to ability and aptitude will be undertaken (84:146)."

The Third Five-Year Plan, recommended,

A vigorous campaign needs to be launched for the introduction of diversified courses at the secondary stage and the introduction of a large percentage of students into subjects such as industrial arts, agriculture, commerce and home economics. Here some guidance and counseling becomes important for directing students to the most appropriate forms of education, to apprenticeship, to craft training or to the study of science and mathematics consistent with their interests and aptitudes (82:187).

Guidance and counseling services were also recommended by the National Commission on Education in 1958 and in earlier educational plans. In spite of these recommendations there exist no such programme in the present stage of development. One of the possible reasons might be limited resources of small schools to implement this expensive programme. Lack of qualified personnel and factors involved in the process of implementation might be other reasons for lack of this programme. Despite importance of guidance and counseling services, it is not possible on the part of the government to help each individual school with such a sophisticated programme. Therefore, one of the alternatives may be to establish guidance and counseling services at the thana centres which will cover all the small schools in that thana. The most critical stages of secondary education where the students need branching off are at the VIII grade and/or matriculation level. These two important stages would be covered by the guidance and counseling services at the thana centres. Hence, the guidance and counseling staff of the thana centres would extend their services to the participating schools of the entire thana by visitations (Figure 5.2).

Guidance and counseling services at the thana centre may render the following four major services:

1. Information about student. This service should be designed to collect information about an individual student from the time he enters school until he graduates.

2. Information about environment. This service should have three distinct parts; occupational information, educational information and social information. The occupational information will explain the opportunities, requirements, advantages and disadvantages of various occupations in Bangladesh. The educational information will include the various educational programmes available in Bangladesh. The social information area will include information about relationship with others and obligations of the individual in maintaining the best possible personal relationships.

3. Counseling. This service will provide each student with an opportunity to get necessary help from counselors for problems which the student cannot solve himself. Counselors would help a student to make his own decisions with respect to the ways and means of attaining his goals in vocational life.

4. Relating to future goals. This service should be provided as a means by which a student can move to his past-school life and to maintain follow-up records. This services will help the student obtain employment, enroll in other schools for additional training, or help him embark upon some other possibility.

#### Coordination Service Programme

In Chapter IV of this report, the lack of coordination was discussed as a major impediment of vocational education programmes in Bangladesh. Different departments of the government have their own

programmes, conducted in their own way; and hence there is confusion, contradiction and duplication of programmes. Therefore, in the context of Bangladesh situation, one of the important roles in successful implementation of the proposed system would be coordination. The new education policy of 1970 also recognized the elements of coordination, such as, "Establishment of a coordination unit at the Ministry of Education (86:12)."

The coordination unit at the national level will, no doubt, find it necessary to maintain coordination among the various agencies concerned (this is discussed in greater detail under the heading Administration and Management Structure of the Proposed System). But the need for coordination at the local level cannot be overlooked. It is, therefore, suggested that there should be a coordination unit at the thana centre. The coordination units at the thana centres would be called upon for conducting the following functions:

1. A liaison between the participating schools and the thana centres.
2. To maintain effective public relations.
3. To contact various commercial and industrial establishments to cooperate with the thana centres.
4. To coordinate the development of various courses for adults and out-of-school youth by other teaching members.
5. To coordinate the various advisory committees.
6. To develop a spirit of cooperation among faculty-student and administrators.

It can be seen from the above mentioned functions that coordination units at the thana centres have many important roles to play in the implementation of the programmes. The following diagram (Figure 5.2) gives the general picture of the coordination and guidance-counseling services.

### Instructional Development

For the acceleration of vocational-technical education, production of educational material within the country needs to be encouraged. Lack of instruction material is one of the major problems in the present system of education. According to the Fourth Plan, "One of the greatest handicaps in promoting better vocational and technical training at the certificate level, whether this is done in the private sector or the public, is the paucity of interesting, accurate and pedagogically-effective textbooks, manuals, workbooks and exercise (84:161)."

In the Third Plan it was recognized,

Use of maps, charts, illustrations, pictorial or model representations, films, filmstrips and other projected materials are a great help in real learning processes. Some institutions are currently making effective use of certain simple devices. But it is necessary that a massive and comprehensive effort be mounted so that all educational institutions are induced and enabled to use the available audio-visual materials (82:209).

Benson in his study (1970) on East Pakistan (Bangladesh) indicated, "Materials of instruction were largely non-existent (24:17)."

This gap in the educational development should be dealt with effectively. One way to solve this problem may be through thana centres. Thana centres may serve in developing materials, media and techniques

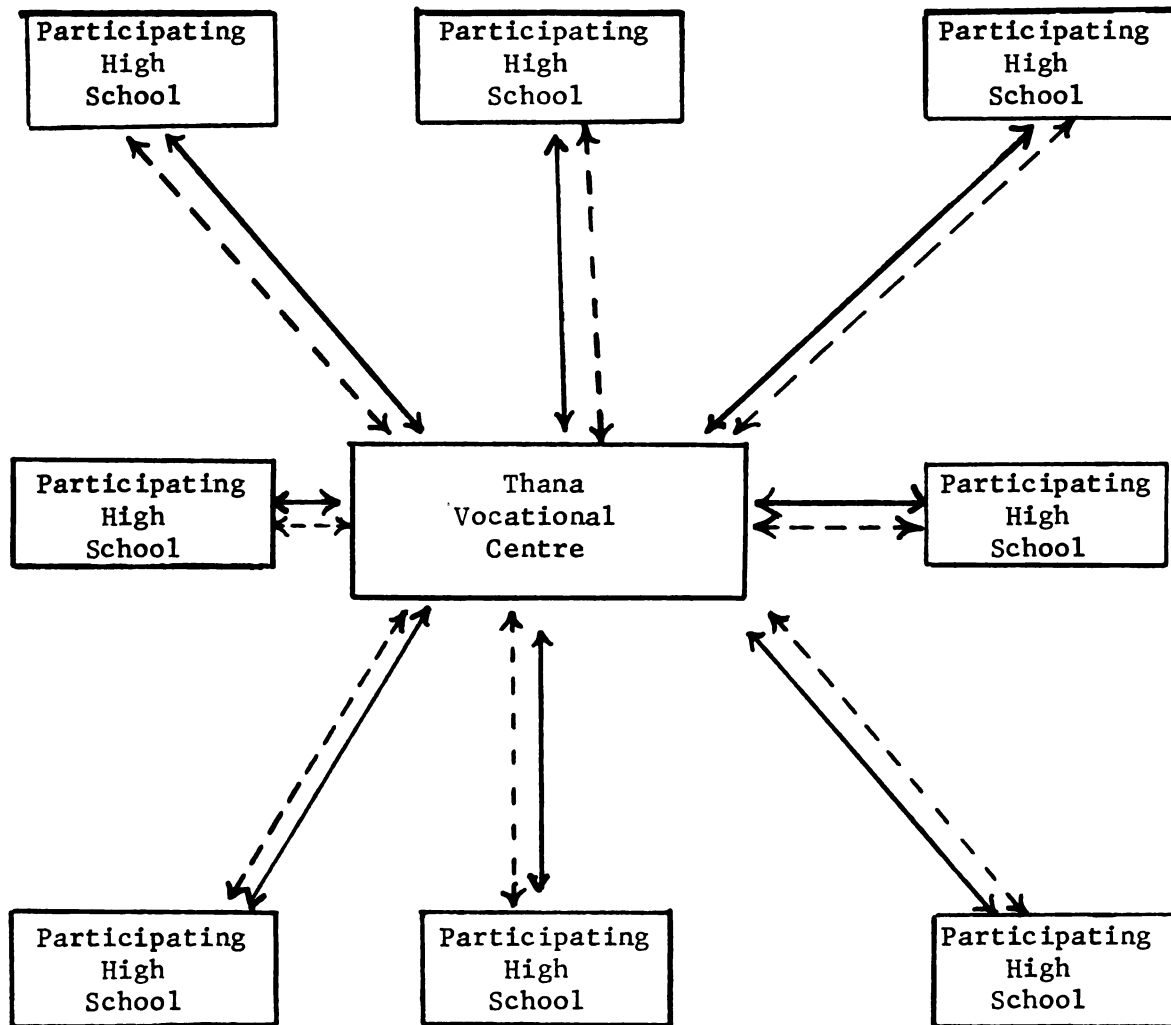


Figure 5.2

- Movement of students from a participating high school to the thana vocational-technical centre
- Movement of counseling and guidance services, and coordinator services between participating high schools and thana vocational-technical centre.



to help the occupational instruction of the participating schools. The thana centres may serve to produce improvised equipment, textbooks, training manuals and other teaching aids for the overall development of vocational-technical education in that thana.

#### Work Experience Programme

The negative attitude toward manual labour with its origin in historical circumstances, still prevails in Bangladesh. This attitude might have intensified because of the lack of growth in science and technology; and consequently the educational system did not acquire a bias towards it. As observed by Khan,

The nineteenth century European education did have a clerical bias. If somebody went to high school or to college, it was to get a classical education. It was to become a gentleman. It was to become what was then called a clerk, a person who was not concerned with manual labour, with craftsmanship, with technology in general, but a person who held a white collar job. Our educational system was based upon this assumption; the purpose of an education was to make a person a gentleman and not a technician (42:4).

Further, the Commission on National Education in 1959, recognized,

... there exists a widespread reluctance to dirty the hands and a tendency to regard manual labour as something reserved for particular classes of people. We are disturbed to find the general impression that the education system has contributed to the existence of these attitudes, and it is a matter of great concern to us that education should, in any way, be a party to the maintenance of cleavage and division within our nation (32:245).

A socialist democracy like Bangladesh cannot allow the ten different elite classes as in the past. Education should be responsive to socio-economic needs of the nation. Attempts should, therefore, be made to change the values placed on manual work. The thana centres can take leadership to change this attitude by introducing work experience

programmes in cooperation with various organizations in the thana. This programme may serve as an effective device to related education to life and productivity and thereby also provide them with vocational experience. This programme may be in the form of practical participation of students in productive situations such as in the school, in the home, in a workshop, on a farm, or in a factory. The thana centres can possibly provide some part-time employment for students. Instead of utilizing servants or hired labour for thana centres and other schools, it may be possible to have much of the work done by students, not primarily to save money, but to provide valuable experience. This will reduce the existing social stratification and help reduce the distinction between intellectual and manual work. In this regard, the experience of the People's Republic of China may provide examples worth studying. Also as observed by Benson,

The wasted hours of the present-day student should be put to use in a National Service Corps. In exchange for the opportunity of attending an institution from the secondary level upward, the students would undertake an obligation to serve a given number of hours each week in the local community: helping to improve the water supply, repairing bridges, painting road signs, building recreational centres, health centres and even drains (24:79).

The Commission on National Education also recommended that,

...Secondary school students should participate in work projects in community service or in such activities as health programmes, flood control, and the cleaning and repairing of wells and drains. In their vocational and technical courses some of the students will have acquired specific manual skills and these should be utilized for the good of the community as well as in anticipation of their own future careers (32:246).

Accordingly, the Academy for Rural Development, Comilla in Bangladesh, has undertaken such a programme on experimental basis

called "the school works programme". Findings of this project indicated that,

The students had found that everyday life could be related to education and that they could earn some money while learning about book theorems in actual practice. They learned about mortars and their proportions, how to level floors by a spirit-leveler, how to find out the total volume of earth moved, the total volume of wood used in furniture, how to make geometric designs for furniture, etc. (19:207-208).

Thus, the work experience programme in the thana centres may help students acquire work habits and insights into productive processes which make their entry into the world of work and employment easier.

#### Teacher Education Programme

Various documents reviewed (in Chapter IV) recognized the lack of teachers as one of the important problems for expanding vocational education in the country. The New Education Policy of 1970 emphasized that, "The need for training a large number of teachers would call for a comprehensive teacher training programme, including the expansion of the normal programme of teacher education and a crash programme of condensed training on an emergency basis (86:19)."

In this regard, the thana centres may serve as a clinical site for teacher preparation and inservice teacher education. A unit of a teacher education college may be attached to a thana centre as an occupational teaching laboratory. Students who are preparing to be teachers may utilize the various facilities of vocational-technical education at the thana centres which are not available in teacher education colleges in Bangladesh. After the completion of the theoretical

portions of the training at the campus of the college, these participants may be placed at the thana centre for imparting the practical aspects of their preparation as vocational teachers. This would impart a great variety of interrelated experiences and reduce the cost of teacher training programmes by avoiding duplication of equipment, service and supplies in the teacher's training colleges. Inclusion of the teacher training programme in the technical institutions is also proposed in the New Education Policy of 1970,

It may be worthwhile to mention that technical institutions should in addition to their normal programmes, also arrange for short-term, sandwich and extension courses in various trades for various kinds of semi-skilled/skilled workers and technicians as well as refresher courses for the teachers in vocational subjects in the schools offering vocational courses (86:12).

Therefore, the thana centres may help solve the problem of vocational-technical teacher shortage.

#### Research and Development Programme

It is generally recognized that no system or programme of vocational-technical education can reach its full potential without research. The proposal of the New Education Policy recognized that,

One of the reasons for our poor academic standards has been the fact that our education policies have not placed adequate emphasis on the importance of educational research. ...By ignoring research, our educational policies have missed the opportunity to maximize the utilization of resources which have been available for education (85:25).

The Fourth Plan also recognized, "Urgent steps will be taken by the Ministry of Education and provincial departments of education

to encourage and promote educational research and offer the required leadership (84:165)."

It is, therefore, imperative that development of vocational-technical education should go hand in hand with research activities. Research efforts may be strengthened by utilizing the various facilities of thana vocational-technical education programmes. Thana centres may have a section of research and development to deal effectively with the challenges and opportunities which confront the vocational education programmes. It may also permeate other relevant problems of vocational education in Bangladesh. A percentage of the total expenditures of the thana centres for each year should be used specifically for experimental, developmental, pilot or innovative programmes. Research and development programmes of thana centres would provide a basis for the study of relationships, principles, and the discovery of new information and verifications of existing knowledge of vocational-technical education in Bangladesh.

#### Curriculum of the Proposed System

Although the proposed system of education is mainly concerned with the secondary level, it has a direct link with the different levels of education in Bangladesh. The need for restructuring of curriculum at the different levels of education in Bangladesh is recognized by the different commissions and educational leaders of the country in the past. In a most recent policy of education, it was proposed in 1970,

It will be necessary to set up curriculum committees at appropriate levels to design curricula suited to the needs of each stage of education. Curriculum development, however, should be viewed as an integrated and continuous process (86:16).

The statement of the document indicates a need for redefining and changing the educational programmes at different stages of the whole educational system. These changes should stem from the basic principle, that primary, junior high, secondary, higher secondary and university levels have a definite role in preparing the individual for the world of work. This whole process of education should be considered as a continuum.

However, in the process of determining the type of vocational-technical education required in Bangladesh, it is necessary to identify the contribution which each educational level should make towards the development of individual occupational competency.

Much consideration should be given in the curricula of elementary and junior high levels as well as to the vocational-technical education at the secondary and higher levels. It was also proposed in the New Education Policy of 1970 that,

It is imperative that science education should commence from the earliest stage of education to develop a scientific attitude by stimulating, sustaining and rewarding the spirit of enquiry and the power to analyze and solve problems. With this end in view it is necessary to modernize the curricula for science teaching on a continuous basis (86:11).

It is, therefore, evident that the curricula of the proposed system of education at the secondary level should have adequate relationship with the other levels of education to maintain consistency and equilibrium within the whole system. However, the following elements may be considered in making a vertically integrated curriculum of vocational-technical education for Bangladesh.

### The Elementary School Level (Grades I-V)

According to the New Education Policy of 1970, "The curriculum of elementary schools should be re-designed around basic linguistic and numerical skills and manual and productive work to suit the practical needs of every day life (86:16)."

Hence the primary education should include some means of giving children at an early age a link and respect for manual work and they should begin to acquire an understanding of the world of work. This may include accustoming them to observation and creative effort; and encouraging them in an intelligent approach to practical problems arising at home and in the community. This approach to primary education is also supported by the recommendations of the Third Plan,

Curriculum development is very important at the primary level. The child's experiences have to be given a practical orientation. The overall objectives of accelerating productivity in an economy have to be kept in view. It has to be remembered, that at this stage in a child's development, foundations are laid of attitudes towards life and environment (82:190).

### The Junior High Level (Grades VI-VIII)

Not much direction is available in the document of the New Education Policy of 1970 or in the Fourth Plan, regarding the curricula of the junior high level. But according to the Third Plan,

Education at the junior high stage consisting of classes VI, VII, and VIII, ...curriculum at this level needs careful attention. At this stage, the school curriculum has also to be expanded to include diversified subjects, craft work and prevocational courses, which the children have to be encouraged to explore (82:191).

Hence, the curriculum at this level should include more information about the world of work and students should be exposed

to exploratory occupational experiences. The student at this stage should be acquainted with the basic requirements of various occupations. The role of guidance and counseling would be very important at this stage to assist each student to capitalize on one's interests and aptitudes for taking vocational-technical courses at the secondary stage.

#### The High School Level (Grade IX-X)

Thana vocational-technical centres would be particularly responsible for this level. The New Education Policy of 1970 and the Fourth Plan gave general recommendations that curriculum at this level should be shifted from general to vocational-technical education; and appropriate curriculum committees should be set up to design curricula suited to the needs of students. In the Third Plan emphasis was the same as above,

Apart from expansion, secondary education is in need of fundamental reorientation of its curriculum. A vigorous campaign needs to be launched for the introduction of diversified courses at the secondary stage and the induction of a large percentage of students into subjects such as industrial arts, agriculture, commerce and home economics (82:187).

However, vocational-technical education at this level would normally serve two groups of students: (1) for those who will terminate their education at this level, and (2) for those who will continue their education at higher levels.

For both of these groups, a relatively broad education for a "cluster" of occupations may be provided. In this type of training most occupations may be clustered. This may be designed to provide education in skills and concepts common to clusters of closely related occupations



of agriculture, industry and commerce. The instruction at this level should be basic to most of the occupations within the cluster. The group of students who will terminate their education at this stage would receive basic training so as to enable them to enter one of several possible occupations within a specific field. The other group, those who will continue vocational-technical education beyond high school level, also need basic skills, ability and understanding for depth training. Therefore, implementation of the cluster approach in the thana schools would provide a broadly based training which would serve the divergent needs of the groups of students.

An advantage would be that an individual acquiring this type of fundamental broad training would be able to move back and forth over several occupational categories and find a better job market than specific training. According to the recommendation of the New Education Policy of 1970, "A large number of student should be diverted to technical, agricultural and industrial streams designed to prepare them for absorption into the economic life of the country (86:16)."

Absorption into the economic life of the country as stated in the above document, would be easier for students in a broad based cluster curriculum. As mentioned earlier most of the vocational-technical education in Bangladesh is offered by different departments of the government mainly to train personnel in their specific field. With this type of narrow specific training, an individual will be at the mercy of situations. Therefore, the thana centres should provide the high school students a kind of vocational-technical education which will form a solid basis for the entry level of jobs, assisting them to reach mental and manual maturity, and which will broaden their

opportunities for various occupations. This approach is also emphasized by the UNESCO conference on the application of science and technology to the development of Asia in 1968, "That in the development of technological education and training, particular attention be paid to the timing of specialization; early narrow specialization is not advisable for countries at lower stages of development where job opportunities are limited (50:76)."

It is, therefore, imperative, that a developing country like Bangladesh should provide a broad type of training. The product of such may be absorbed in the present economy as self-employed artisans or serve as a potential reservoir of trained manpower for future developments of the country. Therefore, the curriculum of cluster programmes which would be derived from the analyses of the common features of occupations, would be very suitable in the context of Bangladesh's situation. Specialized training, when needed, may be received by these high school graduates in an apprenticeship or on-the-job training programme. Most of the students of high school age in Bangladesh are not mature enough to make firm decisions regarding their life's work in terms of identifying a specific occupation. In addition, the broad-based programme would be less expensive and would be more useful than that of specialized programmes at the secondary level.

#### The Post Secondary and Above Levels

The post secondary level may be provided with a wider variety of vocational-technical programmes designed to give depth training for a particular occupation or for several closely related occupations.

Specialized programmes may be at the college or university level.

This is to say that post-secondary level should be of semi-specialization which could lead to specialization at the baccalaureate degree level.

Consistent with other levels, a wide variety of specific occupational preparation may be provided at the college or university level.

Thereby, each level of vocational-technical education would have an unique role to play in the development of occupational competency. The following flow chart (Figure 5.3) gives the general picture of proposed curriculum of vocational-technical education programmes for different levels in Bangladesh.

#### Curriculum for Out-of-School Youth and Adult Programmes

Vocational-technical education for unemployed youth and adults would be narrower in scope than the programmes for youth enrolled in full-time secondary schools. For high school youth, vocational-technical instruction would be only a part of their total programme of studies. On the other hand, out-of-school youth and adults who will enroll in vocational training, are seeking specific knowledge and certain definite skills to help them secure a job or to improve their skills for self employment. Usually such enrollees will be less interested in formal education programmes and do not have the time to study them even if they are interested. For these reasons, vocational offerings for such groups would be usually specific rather than general. These training programmes of the thana centres would be related to local employment or occupational opportunities and other various problems of that particular thana as determined by school

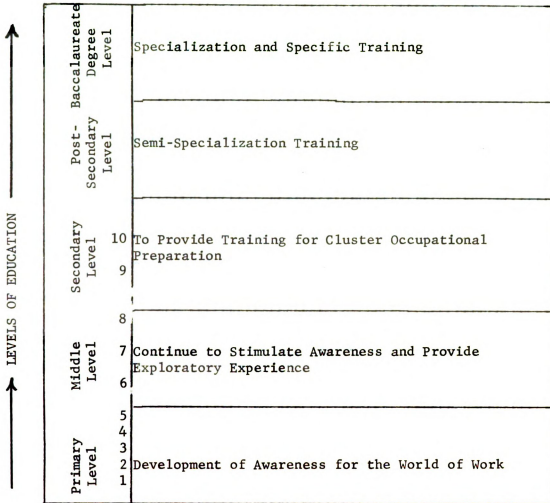


Figure 5.3

A Vertically Integrated Vocational-Technical Curriculum for Bangladesh

officials in cooperation with occupationally concerned and competent individuals and groups.

Administration and Management Structure of  
the Proposed System

Administrative aspects of the existing system of vocational-technical education in Bangladesh are very much complex. As indicated in Chapter IV, there seems to be a conflict among different departments for power and administrative authority over vocational-technical education at the secondary level. As a result, there is confusion and anomalies in the system of vocational-technical education in Bangladesh. As such, the New Education Policy of 1970, recommended that,

It is, however, considered essential that measures should immediately be initiated to decentralize the administration of educational institutions in order to allow community participation and insure academic freedom and administrative and financial autonomy needed by educational institutions for their proper development (86:20).

It is, therefore, desirable that the proposed thana vocational-technical centres should be autonomous in character, and all the departments of the government should extend necessary help and cooperation in the implementation of various programmes. The overall administrative structure of thana centres should be centered in the thana level. As a measure towards decentralization, management and administrative power should be vested at the local level. This will allow close involvement of local people in the educational matters, and will bring school and community together. Decentralization is also necessary to ensure academic freedom for proper development of the system. According to the proposal of the New Educational Policy,

there exists bureaucratic control which denied academic freedom.

In the words of the document, "Teachers have been paid low salaries, they have been made sub-ordinate to the bureaucrat who exercises over them the rights of appointment, promotion, transfer and dismissal (85:6)."

However, decentralization of educational administration would necessitate creating certain educational bodies at the local and national levels. In this direction, the government policy emphasized that, "It has been proposed that all institutions, from secondary schools upward, should have Governing Bodies/Advisory Bodies, with appropriate representation of the Government, parents, teachers, and founders/donors, if any (86:21)."

However, the administration of thana vocational-technical programmes may include the following component parts.

#### A Board of Control for Vocational-Technical Education

At the national level, a Board of control for vocational-technical education should be established which should consist of representatives from the following: (1) a Directorate of Technical Education, (2) a Directorate of Public Instruction, (3) a Directorate of Labour, (4) a Directorate of Commerce and Industries, (5) a Directorate of Agriculture, (6) Chambers of Commerce and Industries, and (7) distinguished educationists. The Secretary of Education may serve as the chairman of this board.

The direction and magnitude of the efforts to promote vocational-technical education at the secondary level may be developed by this board. The board should function as an autonomous body for the formulation of overall policies on the thana school system and

prepare necessary plans concerning the use of facilities and development. Another important function of the board would be to provide required funds upon the request of the different thana centres. The board may also recommend guidelines for the location of the thana centres.

It is important that board should give written policies indicating the place and goals for vocational education programmes in the system of education. These written policies should also specify the duties, responsibilities and relationships of personnel in the thana vocational education programmes. These written policies for thana centres are vitally important for operational stability and also for a sense of security to those who will be involved in the programmes.

#### A Manpower Committee

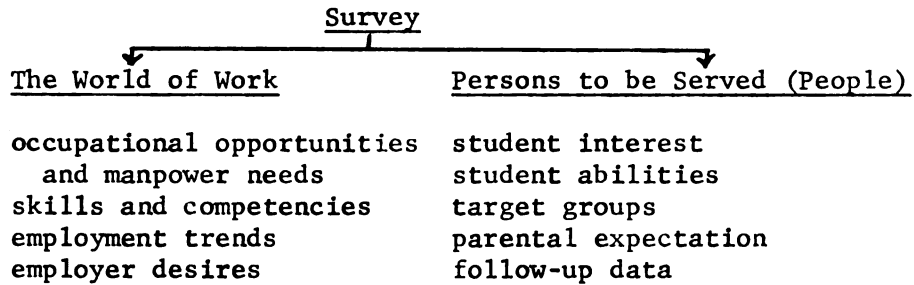
A manpower committee may be established under this Board to collect data for providing information about manpower and occupational trends. This coordination of educational effort would help thana centres to draw up training programmes. The need for such a committee can be seen from the document of the Fourth Plan,

Educational statistics in Pakistan (Bangladesh) suffer from a number of limitations with regard to coverage and accuracy. A number of departments and agencies collect data on the educational system almost independently. There is a complete lack of coordination between these agencies, and the scope, criteria and definitions used, and the purpose for which these data are collected, very widely. The estimates and forecasts made on the basis of such inaccurate data have been occasionally so high that the goals have seemed to be non-attainable (84:148).

Hence, the data available from the different agencies of Bangladesh for determining programme needs would not be very useful.

Therefore, one of the primary responsibilities of this manpower committee would be to conduct surveys to identify programme needs.

The survey may contain the following:



Pertinent educational data as shown above may be collected for use in planning for vocational-technical education programmes. These data may be used in developing a description of experiences which young people and adults should have in order to acquire and maintain occupational competency. According to Byram,

Program needs have their roots in three sources: the needs and interests of the clientele to be served; the occupational opportunities available; and the competencies in workers needed by employers. Data concerning each of these should be obtained without limitation to present vocational offerings. Findings are to be used to compare the contribution of the present program to the identified needs, leading to recommendations for changes and/or expansion (25:vi:i).

However, this approach may be followed to identify what vocational-technical education programmes should offer in the thana centres of Bangladesh. The manpower committee under the board could provide a useful service by issuing a series of publications reporting the findings of the survey and other reports on occupational needs and opportunities.



### Governing Body

According to the proposals of the New Educational Policy, "Every educational institution should have a governing body to look after its day to day administration (85:8)."

It is, therefore, imperative that at the local level there should be a governing body for each thana centre. The governing body will help the head of the thana centre or effective operation, in accordance with the policies given by the board of control. The governing body should be elected and consist of representations of the localities to be served by thana centres.

### Advisory Committees

Consistent with the government policy, each thana centre should have some advisory committees. These committees will consist of those people who are professionally competent and interested in the activities of the thana centre. They may offer advisory services in formulating different programmes of thana centres. Representatives of this committee would be mostly from government technical officers posted at the thana level and from industrial, agricultural, commercial firms, local leaders, teachers, local educationists, and representatives from self employed people.

### Faculty Council

One of the recommendations stated in the proposals of educational policy is that, "Financial powers within approved budgets and decisions such as the appointment and promotion of teachers should be delegated to the educational institutions themselves in the governance of which, teachers should be allowed to have an effective voice (85:7)."

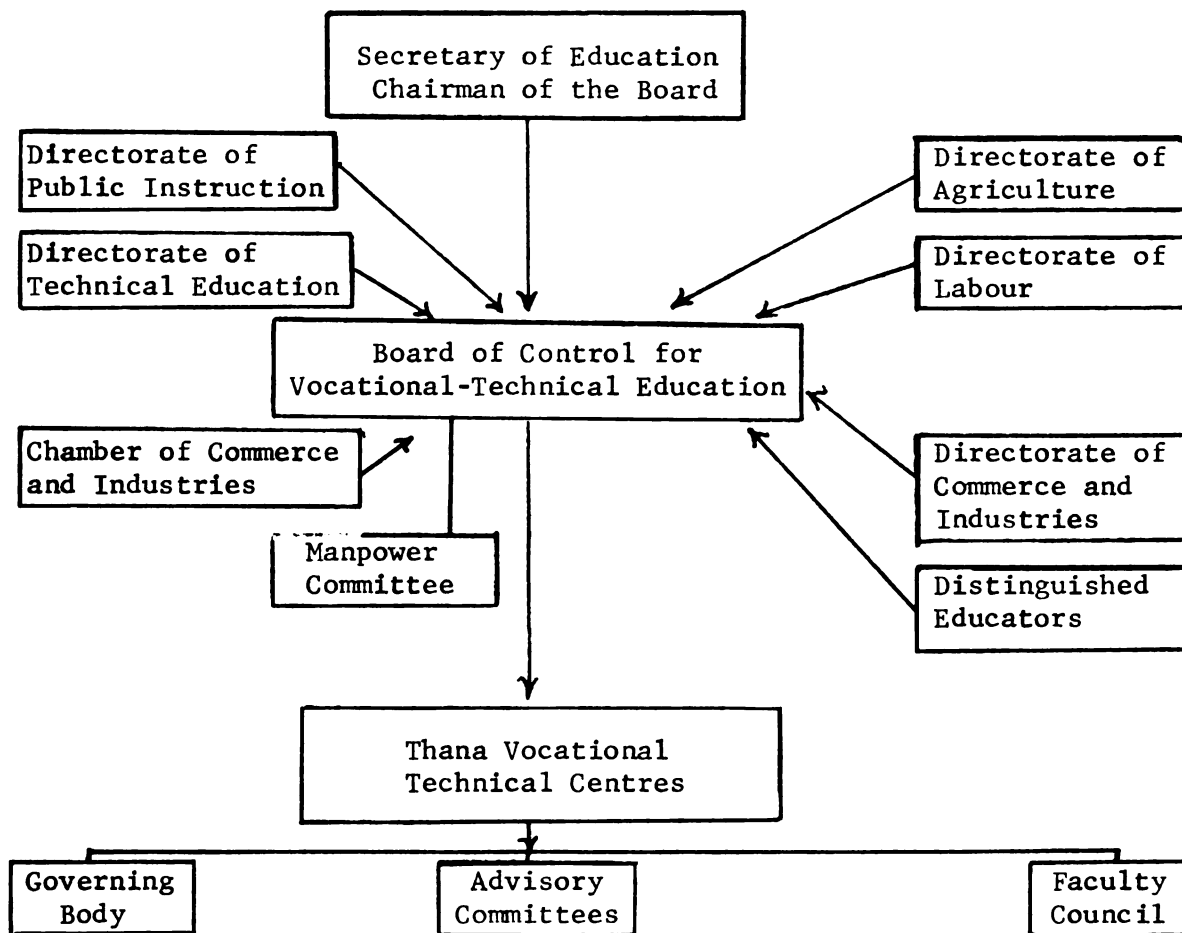


Figure 5.4

Administration and Management Structure  
of the Proposed System

Hence, to preserve rights and responsibilities of teachers and to maintain an effective voice, all thana centres should have a faculty council with the head of the school as chairman. The main purpose of this council would be to discuss various problems faced by faculty members, exchanging ideas and recommendations for adequate measures. The development and progress of different on-going programmes of thana centres may also be discussed at the faculty council meetings.

#### Academic Freedom

The faculty and administrators of thana centres should be given considerable freedom from the normal control. As recognized in the New Education Policy of 1970, "The present administrative set up of education in Pakistan inhibits initiative and creative self-expression which can flourish only in an atmosphere of relative freedom and responsible participation (86:20)."

Therefore, it is imperative, that unlike the existing system, they should not be rigidly controlled or subjected to formalities which leaves them no possibility of adaptation. Vocational-technical education, being so varied in character and methods, requires a flexibility which cannot be maintained if a ban is placed on local initiatives. It is essential that a certain independence must be permitted to those who have to carry out the plans of thana vocational-technical education programmes.

However, allowing academic freedom to students is equally important for the purpose of providing the environment, most conducive

to teaching-learning processes. The basic necessity for enlargement, dissemination and application of knowledge are freedom of expression and communication. Without this freedom, effective sifting and teaching-learning are stifled. But absolute freedom is anarchy, just as absolute order means tyranny. Therefore, all regulations of the thana centres should provide the best possible reconciliation of the principles of maximum freedom and necessary order which promotes its basic purposes.

## CHAPTER VI

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### Summary of Study

The study was designed to investigate the current situation of vocational-technical education at the secondary level in Bangladesh and to review the recommendations which have been made as one basis for developing an improved system of vocational-technical education.

The objectives of this study were:

1. To examine the current situation of vocational-technical education at the secondary level in Bangladesh with respect to:
  - a. Recent policies on education and manpower,
  - b. Secondary education and its curricular offerings,
  - c. Opportunities for vocational education for youth and adults,
  - d. Administrative structure of vocational-technical education,
  - e. Teacher supply for vocational-technical education,
  - f. Availability of physical facilities including shop laboratories and requisite equipment,
  - g. Student enrollment in vocational-technical education programmes; and
2. To propose an alternative system of vocational-technical education for Bangladesh in order to overcome the existing shortcomings.

### Procedure

The study was based on reliable secondary data. Criteria for selecting (1) publications, and (2) authors, were the following:

#### Publications:

1. Official publications from the Government of Pakistan and East Pakistan/Bangladesh.
2. Official publications of agencies and organizations which conducted studies and projects in Pakistan and/or Bangladesh.

#### Authors:

1. Associated with the government,
2. Associated with organizations or agencies which have conducted studies or projects in Pakistan and/or Bangladesh.

Analyses were based on a review of the analytical statements in various documents and preparation of a synthesis of the major points which were reported.

Plans for alternative system of vocational-technical education were developed on the basis of a synthesis of the recommendations from government documents, authors associated with the government, international publications related to Bangladesh, and some principles which have been advocated by recognized leaders in education. Feasibility of the proposed alternative system was examined in the light of the government's new perspective in education as reflected in the various documents.

### Limitations of the Study

The following limitations were acknowledged for the purpose of conducting this study:

1. The study focused primarily on formal education and was limited to the secondary stage of the high school level (i.e., matriculation and equivalent level in Bangladesh).
2. Analyses were made by using selected secondary data which had been compiled by various agencies, institutions and individuals.
3. The study was confined to the institutions offering vocational-technical education open to general public and did not include in-service training offered by other institutions under government and quasi-government organizations.
4. Publications produced during Pakistan time (1947 to 1971) were used to analyze the situation of vocational-technical education. These publications were not a direct product of the Bangladesh government.

#### Summary of Findings

##### Development of Schooling Under Different Social-Philosophical and Economic Foundations

Bangladesh has inherited the educational system originally installed a century ago and founded upon socio-economic and politico-cultural bases entirely different from those of a truly independent country. This educational system provided little opportunity for the people to take advantage of a scientifically and technically advancing world. In the past, education was mostly regarded as an end in itself, justifying the substantial sums invested in it by the very fact of its existence--without regard to its utility or its influence on the society.

Long before institutionalized education, vocational education was a matter of handing down the skill from one generation to another.

Bangladesh is a new state but not a new land. The present status of education in Bangladesh has many socio-economic and cultural impacts of the past. The system of education during the ancient Hindu period was based on rigid caste systems which may impede educational development. During the Muslim period, democracy replaced the caste system and formal education including some vocational education was introduced. During the British period, the system of education, excepting liberal arts for clerical professions, paid no attention to other vocational fields such as agriculture, commerce and industry. During the Pakistan period, although some changes in education took place, the emphasis of education inherited from British colonial rule remained on liberal arts.

#### Recent Policies on Education and Manpower

During the Pakistan rule, the utility factor of education was greatly overlooked by the planners. Hence the liberal arts education which had less demand in the job market played a dominant role over the vocational-technical education. However, the planners and policy-makers of Pakistan neglected to see educational outlays as a form of investment with high potential economic benefits. The Planning Commission of Pakistan which was the supreme authority of decision-making, placed emphasis on the productive sectors rather than on education. Investment in education was viewed as less tangible and less spectacular than the productive sectors. As a result, manpower and educational planning did not receive adequate attention in the overall development plan of the country.



For the first time in recent history, Bangladesh got the opportunity and responsibility to use the resources of its country for its own development. The problems of development were many and varied in Bangladesh. The magnitude of the problem of unemployment and growing labour force was tremendous. Skills at all levels in industry, agriculture and other fields were reported to be quite low. About 84 percent of the labour force was considered to be illiterate, i.e., had not even completed primary education (grade V).

The existing system of education in Bangladesh has contributed greatly to the situation of large scale unemployment. The educational system was not geared to the social and economic needs of the country; in other words, not producing the right kind of manpower in quality and quantity needed for the development of Bangladesh.

#### Secondary Education and Its Curricular Offerings

Education at the secondary level has not been properly related to the world of work. The courses of study at this level were too academic and unrelated to life. The programmes of secondary education in most of the schools of Bangladesh were arts and humanities, academically narrow and bookish. The system did not cater to the different aptitude, interest and talent of students. Hence, one of the major weaknesses of the existing system at the secondary level was the lack of adequate opportunities for education in vocational-technical fields.

Education at the secondary level has been designed as a preparation for entry to higher education. But in reality, only a

small percentage of secondary graduates enter colleges and a vast majority terminate their education at the secondary level.

The problem was further aggravated by long standing prejudice of educated people against manual work. The system of education produced white collared generalists classified as "gentlemen", and made them believe that manual work was for the illiterate class of people.

The type and content of education, which is particularly important for employment even at the lowest entry level, was not offered at the primary level. The next level, the secondary education which was considered to be an adjunct to college education and predominantly literary and general in character, was of little value in the job market. Further, education at the higher level was a mismatch between the content of education and employment readily seen in undue emphasis on university general education.

In analyzing the education of the different levels the question arose as to whether the absorptive capacity of Bangladesh should constitute a limit for educational expansion, or whether educational expansion should continue despite the growing unemployment in rural areas and mounting unemployment in urban areas. There was no reason to recommend a ceiling on the growth of education but rather the necessity of establishing the priority in education. Continued development of education was recommended, because social development--a positive change in the social environment--to which education can contribute was viewed as being as indispensable to sustained economic growth as was the flow of capital. Therefore, there were problems of

priorities within the educational system. Since non-utilization of education was identified as a waste of resources, a higher priority should have been given to those types of education which were of crucial importance for economic development of Bangladesh, such as, vocational-technical education at the secondary level and below that level, to produce skilled manpower. This action would have required a decisive change in the secondary education system of Bangladesh.

To make education more useful, vocational preparation should be one of the important purposes of secondary schools in Bangladesh. Contemporary statements including UNESCO recommendations emphasized the purpose of secondary education should provide for both liberal and vocational-technical education. But in Bangladesh, this principle did not provide much direction for the secondary school programmes. General education and vocational-technical education were found to be divided and not considered as parts of a whole process.

#### Vocational Education for Youth and Adults in Urban and Rural Areas

Educational programmes outside the school system, such as, in the urban and rural areas have not been very promising either. The private industries, which in the past dominated the urban economy of Bangladesh, were reluctant to accept any responsibility for training of their workers. As a result, the development of on-the-job training and apprenticeship programmes have been practically neglected. Arrangements for upgrading the workers' skills have not been available in Bangladesh. This situation of inadequate training facilities in rural and urban areas may impede the growth and development of industries.

In the rural sector, agriculture is the main occupation of people and in fact, the foundation of Bangladesh's economy. But the results of agricultural development in Bangladesh has not been very promising. Improvised, outdated agriculture with low productivity can no longer feed the teeming population which is increasing at the rate of about three percent per year. Agricultural production could be greatly increased by training of farmers. Eighty-five percent of the people of Bangladesh are living in villages as farmers, yet the curriculum which is being taught in the primary and high school has almost nothing to do with agriculture. Neither any systematical arrangements and facilities for conducting farmers' training programmes adequately available in Bangladesh.

Hence, one of the basic problems at the lower level in Bangladesh is the insufficient application of science and technology in production and daily life. The economic benefit which might be expected to result from widespread basic knowledge and application of science and technology do not materialize in Bangladesh. Masses of farmers and workers are illiterate, have not received any occupational training and hence do not apply the techniques which could greatly improve their production and standard of living. This situation in Bangladesh has come to such a head that expansion of rural facilities remained as an important factor for the total development of a Bangladesh as a whole.

The inadequate situation in the rural sector of Bangladesh, was viewed as due primarily to the lack of educational development which could serve as a powerful accelerator of rural modernization. Education in rural Bangladesh, especially of the secondary level, was

financed primarily by private organizations. This was indicated by the fact that high schools had arisen where private enterprise and beneficence were available. High schools were not well distributed geographically, with many rural areas largely neglected.

Most of the government high schools with better amenities were located in the urban areas, whereas 85 percent population of the people are living in the rural areas. This disparity between rural and urban areas was due to the planner's tendency to use resources for expanding educational institutions in the show places of the country resulting in a widening of the gulf between the resourceful urban schools and backward rural schools.

#### System of Vocational-Technical Education and Its Administrative Structure

The existing vocational-technical education system in Bangladesh, was found to be a heterogeneous mixture of some vocational-technical institutions under different Directorates. The different programmes of vocational-technical education were administered through four separate governmental units: (a) the Directorate of Public Instruction, (b) the Directorate of Technical Education, (c) the Directorate of Labour, and (d) the Directorate of Commerce and Industries. The Directorate of Public Instruction had a programme of vocational education through some pilot and multilateral high schools; the Directorate of Technical Education offered this education through some vocational training institutions; the Directorate of Labour had some technical training centres for this education; and the Directorate of Commerce and Industries was offering some courses through weaving schools.

Each directorate appeared to be administering the programmes of vocational education in isolation from the other directorates.

Therefore, it can be said, that the present system of vocational-technical education at the secondary level was not centrally coordinated. The responsibilities are dispersed among many agencies and there existed confusion, contradiction and duplication of programmes. Because of these types and standards, there was little comparability of qualification, nor were there adequate relationship between the type of training needed and training carried out by various agencies. Also there existed lack of cooperation and coordination among the various agencies. One of the basic weaknesses of the existing system of vocational-technical education at the secondary level was failure to perceive it as an integral part of the total educational effort.

#### Problems of Expanding Vocational-Technical Education

Statements in the various contemporary government documents and reports by educational leaders emphasized a desire for a major shift towards vocational-technical education at the secondary level through high schools. This type of massive shift in education policy towards vocational and technical education at the secondary level through high schools was no doubt an ambitious plan. But the resources in terms of teaching staff, workshops, laboratories, equipment, supplies and money, for these expensive programmes of vocational-technical education were rather limited in Bangladesh. The lack of specialized equipment, laboratory facilities and trained teachers may become a great barrier to the expansion of vocational-technical education in the high schools.

As discussed in Chapter IV, most of the schools in Bangladesh, offering vocational-technical courses had inadequate facilities and funds. Within the limited financial resources of Bangladesh, it was believed to be neither possible for the government to support every individual school to build modern shop-laboratories and classrooms, nor to buy up-to-date equipment and supplies. Also, it was not possible on the part of the government to produce adequate trained teachers within a short period of time. Therefore, a need existed for an alternative system (Chapter V) to overcome the shortcomings.

#### The Proposed Alternative System

The proposed system of thana vocational-technical education programmes emphasized that all the existing training institutions at the thana level should merge into one. The high schools of the thana would share in the use of facilities provided by the proposed comprehensive programme of thana vocational-technical centres. This combined effort would reduce the cost of training by economizing the use of laboratory facilities, equipment, trained teachers for expensive vocational-technical education. These thana centres, in addition to high school programmes would be expected to offer vocational education programmes for adults and out-of-school youth of that thana. Due to high density of population in Bangladesh, the commuting distance between the high schools and the proposed thana centers would not be very great. Within the limited resources of the government it would be easier to provide adequate facilities in a few schools at strategic locations rather than helping each of the secondary schools to offer

vocational education. The proposed system would be one of the best alternatives to expedite the growth of vocational education for all age groups, such as, adults, out-of-school youth and high school youth in Bangladesh.

The thana as the main focus of the proposed system of education appeared to be consistent with the development plans of Bangladesh. Many recent developments were all thana based, and the concept of the thana as a unit of development has gained more importance than ever before. Moreover, experiments at Comilla also demonstrated that the thana is an effective unit for development. The existing training efforts at the thana level, such as, vocational training institutes by Directorate of Technical Education, thana training and development centres by the Department of Rural Works Programmes, and training efforts by the Labour and Commerce Department have not been concerned with the high school youth. The government policy in recent years has emphasized a massive shift towards vocational-technical education at the secondary level. Limited resources were available to implement that policy. Therefore, the proposed system emphasized consolidation of all government vocational programmes under one administrative unit and to include programs for high school youth, adults, and out-of-school youth. The basic programmes of the proposed thana vocational-technical schools should include the following areas:

1. Pre-vocational instruction
2. Programmes for secondary school students
3. Programmes for out-of-school youth
4. Programmes for adults



5. Guidance and counseling services
6. Instructional development activities
7. Re-service and in-service teacher education programs
8. Research and development programmes.

### Interpretations of Findings

The following were the interpretations relating to the major findings of the study:

1. The country has inherited the present educational system which was established more than a hundred years ago by foreign governments and founded upon political, social, economic and cultural concepts different than those present today in Bangladesh. This education system was originally created under British colonial rule to fulfill the need of training English-speaking clerks and office workers. Hence, there is a need for reorientation of education to meet the needs of this new nation.

2. During the period of Pakistan since 1947, no changes in basic structure of the education system were introduced. The result has been that educational institutions have continued to produce white collared generalists (Table 3.3). Thus, the system of secondary education remained virtually the same as that inherited from Britain.

3. During the Pakistan rule education was one of the most neglected areas of economic planning. The Planning Commission of Pakistan considered physical capital accumulation as the exclusive factor in economic development and neglected to see educational outlays as a form of investment with potential economic benefits. With its total expenditure on education accounting for 1.9 percent of G.N.P.

(Table 3.1), Pakistan ranked among the countries which accord a low priority to education. As a result, manpower and educational planning did not receive adequate attention in the overall development plan of the country.

4. The magnitude of the growing labour force of 28.6 million with a 20.4 percent rate of unemployment (Table 3.2) in Bangladesh is alarming. The educational attainment of the labour force is extremely low. About 84.1 percent (Table 3.4) of the labour force have not completed primary education (grade V). These vast human resources not equipped with some saleable skills constitute a great burden on the society and a constraint on economic development.

5. The insight gained from the present study indicated that the existing system of education at the secondary level in Bangladesh has not been properly related to the world of work in the country. The system has not produced the right kind of manpower for the development of Bangladesh.

6. The system of secondary education in Bangladesh is dominated by liberal arts education (Table 3.3 and 4.3) which is too academic and unrelated to life. This kind of education has not equipped the graduates to find employment because the demand for such kinds of education are very limited in the job market. The large scale unemployment may be attributed in part to this imbalance.

7. The curriculum of secondary school systems does not offer courses which are needed for the practical life situation and socio-economic development of the country. The percentage of schools offering various courses as shown in Table 3.3 were 100 percent in humanities, 42.8 in science, 19.7 in commerce, 1.2 in home economics,

0.4 in industrial arts and 2.3 in agriculture. Expansion of the existing system which has emphasized liberal arts education would be mere wastage of the country's scarce resources. Hence, it is necessary to give the system a new orientation in keeping with the country's social and economic needs and aspirations.

8. Due to lack of attention to the scientific and industrial development of the country in the past, a false prestige has been assigned to liberal arts attainments rather than manual dexterity and pride in craftsmanship and technical accomplishment.

9. There is a wide disparity in the growth of educational development between rural and urban areas of Bangladesh. Most of the secondary high schools are financed in whole or part by private organizations. This has meant that secondary schools have arisen where private enterprises were available, and as a result high schools are not geographically well distributed, with rural areas being largely neglected.

10. There is low enrollment in vocational-technical education at the secondary level. Enrollment according to curricula in different high schools (Table 4.3) were 241,034 students in humanities against 551 in agriculture, 746 in industrial arts and 836 in home economics. The choice of courses of study is mainly dictated by the ambitions of parents or other considerations rather than considering national need and student's own endowments, capabilities and interests. It is beyond the means of individual schools to introduce guidance and counseling services since a large part of the burden of financing secondary education is now shouldered by private agencies. Neither

can the government afford to provide such a sophisticated service to each individual school in Bangladesh. Therefore, there is a need for an alternative system for providing these services in an economic and rational way.

11. General education and vocational-technical education are divided in Bangladesh, and are not considered as an unified integral whole process. Vocational-technical education has been generally divorced from the rest of the educational system. Most of the vocational-technical institutions at the secondary level are branches of the different Directorates. Hence, there is a need for a consistent and unified system of secondary education.

12. The Directorate of Public Instruction's goals for expanding vocational education in other secondary schools by imitating pilot high schools seems to be unrealistic and impractical.

13. The diverse administrative and financial control of the different Directorates over the existing system of vocational-technical education make it exceedingly difficult to achieve any real progress. Different Directorates try to expand vocational-technical education without evidence of cooperation or coordination with each other.

14. In the urban sector, the participation of industry in non-formal training is minimal. There is little appreciation of the value of training programmes such as apprenticeship programmes. Lack of training programmes has created a gap in manpower development.

15. The economy and population of Bangladesh are overwhelmingly rural. But training facilities for this rural people are not adequately available. Agriculture is the foundation of Bangladesh's economy and

the training of farmers is an important factor for introducing new technology. The existing educational system lacks such training programmes.

16. The insufficient application of science and technology in production and daily life in the grassroot level of Bangladesh may be due to lack of any organized educational programmes for adults and out-of-school youth related to the problems faced in their own communities.

17. The expansion of vocational-technical education at the secondary level of Bangladesh depends in part on an adequate supply of trained teachers. But there are impressive evidences of short supply of qualified trained teachers in vocational-technical education at the secondary level. Prospects of sharp increases in vocational-technical education through individual high schools is not very promising, especially in view of the severe difficulties in obtaining trained teachers. In the expansion effort, the dearth of qualified teachers will become more pronounced if development schemes for vocational-technical education are undertaken on the basis of individual schools.

18. Provision of adequate physical facilities including shop-laboratories, up-to-date equipment, and supplies is another essential prerequisite for development of vocational-technical education. But most schools offering vocational-technical courses in Bangladesh are suffering due to lack of such facilities. It is extremely doubtful whether the limited financial resources of Bangladesh will permit sufficient help to each individual school to build up adequate

shop-laboratories and provide equipment and supplies for vocational-technical education.

19. Thana vocational-technical school system has been proposed as an alternative to solve many of the major problems in expanding vocational-technical education within the limited resources of Bangladesh. The proposed system may serve several well defined functions which are needed, including development and maintenance of high standards, wider geographical coverage, greater opportunities for all in education and training.

### Conclusions

Many of the programmes recommended by educational leaders for strengthening vocational-technical education are feasibly sound. But evidence of implementation is not available. Lack of implementation may be due to want of funds, operational knowledge and various political factors involved in the country. In many cases the recommendations for vocational-technical education have not been based on through consideration of the operational aspects and various input factors involved. In other words, some recommendations are not very relevant in the context of Bangladesh's situation. Therefore, many of the statements of national goals in education may be good but difficult to implement. In the documents, the goals of educational development are usually indicated with a general direction instead of any specific direction to follow. These directions of educational development to be followed are not necessarily based on any research or depth study.

The findings of the study raise questions about the extent to which the product of the existing educational system would be able to satisfy either themselves or the economic growth of the country. It has been argued that Bangladesh should stop producing liberal art graduates and concentrate on the development of vocational-technical education for which the country would have greater advantage. If an adequate system for such education could be developed, then there should be no cause for concern. Therefore, much information is required particularly for educational planning purposes and about the changing structure of education. However, for sounder decisions to be made in the area of vocational-technical education more analytical studies are needed particularly for generating trained manpower in the country.

#### Recommendations

The following recommendations for bringing educational change in the system of vocational-technical education at the secondary level are offered with the hope that these changes will bring about improvement in the existing system of secondary education and thereby life for all in Bangladesh.

1. The secondary education programme of Bangladesh should offer a more diverse and enriched series of vocational-technical courses to prepare individuals in terms of their own capabilities and the social and economic needs of the nation. It is imperative that secondary school systems should offer adequate vocational-technical courses so that the consumer of this education can achieve a gainful

employment and a rewarding life in the society. Additional research should be conducted regarding the type of training which secondary educational institutions should provide.

2. The national plan for development should be geared to the maximum utilization of the human capital, particularly by concentrating on the creation and multiplication of job opportunities, potential for self-employment, and a general development of a better trained citizenry. As a step in this direction, a general survey of educational needs should be conducted which will provide additional information for the direction of educational programme planning.

3. National efficiency is the sum total of the efficiency of all individual citizens, and the national wealth is the sum of their wealth-producing capacity. Therefore, vocational-technical education should be a concern of the government. Its strength and well-being are tied inseparably to the skill, technical knowledge and productivity of the people. This is why it is recommended that the government of Bangladesh reinforce and re-emphasize its vocational-technical education system to promote further development and improvement of vocational-technical education at the secondary level.

4. It is recommended that the concept of thana vocational-technical education programmes proposed in Chapter V, be implemented so that vocational-technical bias in secondary education can be more nearly fulfilled within the limited resources available in Bangladesh. Implementation of the proposed system may offer a solution to most of the problems faced by the existing system.

5. It is recommended that research should be conducted on self-study of the proposed system or on a pilot project of the proposed



alternative system as it is tried out. Such a self-study may provide some additional information on operational knowledge and necessary modifications, if any.

6. It is recommended that research be undertaken to determine the anticipated need for funds and other financial implications involved in the implementation of the proposed system. The proportional share of government, industrial establishment, local support and other desirable methods for securing these funds may be determined.

7. It is recommended that the existing vocational-technical institutions should be separated from the various government departments and to be a part of the proposed integrated educational system. One of the important requisites of the proposed system would be integration of all vocational education into one directorate or department. In this regard, it is desirable that the government should take adequate steps to develop and adopt an official policies regarding the role of different departments; and organizational patterns for the establishment of thana vocational-technical education programmes.

8. The urgency of making a series of changes in the curriculum of secondary education and other levels should be recognized. These changes should stem from basic principles such as: secondary education levels and other levels have their own objectives in terms of the needs of youth. Curricular study should be done to determine, particularly the proposed clusters of closely related occupations, and appropriate methods of teaching the clusters. In this regard the Department of Education or the authority concerned should develop and publish a statement of curriculum philosophy concerning vocational education in the system of education.

9. Industrial training programmes should be recognized so as to systematize the programme. Training given on the job and in apprenticeship should account for a large part of specific training in the country. Since big industries in Bangladesh are few in numbers, perhaps on a cooperative basis between the industries and training institutions may be another way to meet the situation. The industries may impart the practical instruction and the training institutions may cover the theoretical instruction. Research should be conducted to determine the most promising methods of such training.

10. To begin to cultivate a deeper appreciation of the dignity of labour and habits of industry, the proposed work experience programme in Chapter V may be implemented. A survey may be conducted on the availability of various establishments in each thana for placing students to acquire work experience.

11. A well adapted vocational-technical education system is useless if young and adult people of Bangladesh do not make sufficient use of it. Students selection of subjects of study appear to be without having adequate knowledge of career prospects. It is, therefore, recommended that research may be conducted on career opportunities and on the feasibility of implementing guidance and counseling services at different stages of educational systems in Bangladesh.

12. Secondary education in Bangladesh should have its own terminal objectives to meet the diverse needs of the country's middle level manpower, rather than preparing youth for college and university entrance. It is recommended that adequate steps should be taken to develop such terminal objectives and to use those objectives in the revision of curricula for secondary education.

13. It is imperative that adequate training facilities should be provided for adults and out-of-school youth to meet the needs of practical life and local environments. It is, therefore, recommended to conduct a survey for local training needs at the thana level to offer courses by the thana schools.

14. The lack of trained teachers in vocational-technical subjects is one of the most serious bottlenecks in developing vocational education at the secondary level. An appraisal of vocational teacher education programmes should be undertaken in Bangladesh. Perhaps a special body should be appointed by the government to study the situation of teacher education. Existing teacher's training colleges of Bangladesh may revise their programmes to include training programmes of vocational teachers. Proposed thana schools may be used for the practical training of the teacher's programme sponsored by the teacher's colleges.

#### Recommendations for Further Research

In the following a few recommendations for further research in this area are presented.

#### Physical Structure and Related Problems

The implementation of the proposed system of thana vocational-technical education programmes will require construction of new buildings or extensions to present buildings. The present report did not offer guidelines for building design including design of shop laboratories, classrooms, etc., or the type of construction. Further,

it is necessary to identify the exact location of these buildings as far as possible in the centre of or in a strategic place in a thana. It seems desirable to conduct a study in depth that would shed light on these problems and provide for the orderly development of a nationwide system of thana vocational-technical schools.

#### Sparsely Populated Area Study

A study may be conducted to explore various alternatives for providing adequate vocational-technical programmes in (The) Chittagong's Hill Tracts and other areas of Bangladesh where population is too sparse to justify proposed thana vocational-technical programmes within a short commuting distance.

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## APPENDIX A

APPENDIX A

INFORMATION ON IMPLEMENTATION OF THE  
PROPOSED SYSTEM

The implementation of the proposed system of the Thana Vocational-Technical Education Programme will involve the following points for considerations: (A) the physical plant, (B) population involved in the programme, (C) commuting distance involved in the programme, (D) requirements of the number of thana centers, and (E) separate plans for the Chittagong Hill Tracts district.

A. The Physical Plant

The construction projects for establishing thana vocational-technical centres may be of three types:

1. Selecting vocational training institutes, thana training and development centres, pilot high schools and other heterogeneous technical institutions which are located in a strategic or central place of thanas for remodeling in the light of the proposed thana centres.

2. Some of the existing multilateral high schools which are located in a strategic or central place of thanas may be selected for rehousing and re-equipping until the standards of proposed thana centres are met.

3. In the thanas, where the above mentioned types of institutions whether available or not and not fulfilling the purpose, will obviously need new construction for establishing thana centres.

#### B. Population Involved in the Proposed Programme

Thana centres would be mainly concerned with the three groups, the high school youth, the unemployed adults and the out-of-school youth. In view of the limited resources of the country, it is neither feasible nor expected by the government to have one hundred percent participation of the above mentioned groups of people.

Therefore, the following calculation would be based on sixty percent participation of high school youth at the IX and X grade (as proposed in the New Education Policy of 1970) and ten percent of the unemployed and underemployed labour force. Adults and out-of-school youth groups would fall under unemployed and underemployed labour force, which are extremely high in Bangladesh. Even a population of ten percent participation of such groups would be more in number than sixty percent of high school youth. Therefore, at the initial stage, it is reasonable to include ten percent which may be increased at subsequent stages of development as desired by the government of Bangladesh.

Calculation\*

Total population of Bangladesh = 75 million (approximately),  
 Actual labour force = 24.7 million, Unemployed and underemployed =  
 20 % of labour force (normal time), and actual unemployed and under-

$$\begin{aligned}
 \text{employed labour force} &= 4.94 \text{ million} \\
 &\quad (24.7 \times 0.20) \\
 &= \frac{4.94}{75} \times 100 \\
 &= 6.6 \% \text{ of the total population (66 persons} \\
 &\quad \text{per thousand)}
 \end{aligned}$$

Enrollment at IX and X grades = 0.395 million

$$\begin{aligned}
 \text{Percentage of total population} &= \frac{0.395}{75} \times 100 = 0.526 \% \\
 &\text{i.e. (5.26 persons per thousand)}
 \end{aligned}$$

Assuming 10 % participation of unemployed and underemployed  
 labour force and 60 % of high school youth at IX and X grade in the  
 thana schools:

$$10 \% = 0.494$$

$$60 \% = 0.237$$

$$0.494 + 0.237 = 0.731 \text{ million}$$

Therefore, the total population involved in the proposed thana  
 school programme would be 731,000 which is approximately 1 % of the  
 total population of Bangladesh.

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\*Calculations are based on the data published in the Pakistan  
 Fourth Five Year Plan (1970-1975).



### C. Commuting Distance Involved in the Programme

To facilitate easy commutation, thana centres would be located (in terms of miles) as far as possible at the centre of each thana. The number of such centres per thana would be based on the population of that particular thana. As shown in the above estimate, approximately one percent of the population of each thana would be involved in the programme. Assuming each thana centre to handle 1000 participants per year, some thanas may have to have more than one unit, based on population of individual thanas. The following table gives the general picture of the commuting distance based on the radius of each thana.

Table A.1  
Classification of Thanas by Area

Area in Sq. Miles	Radius in Miles from Centre (Appx. Distance)	No. of Thanas
0 - 79	0 - 5	One { 102
80 -114	5 - 6	Unit { 89
115-154	6 - 7	{ 105
155-199	7 - 8	More { 57
200-314	8 -10	Than { 42
315-above	10-above	One { 5
		Unit
*Chittagong Hill Tracts District		12
Total		<hr/> 412

\*Shown in Appendix B

From the previous table it can be seen that three-fourths (296) of the number of thanas falls within a radius of 7 miles. Only 5 thanas fall within a radius of more than 10 miles. All five thanas (150, 53, 54, 64, and 83 See Appendix C) would involve more than two thana schools because of higher population. By selecting strategic locations for these centres, commuting distances can be considerably reduced.

Based on commuting distance, 206 thanas require at least one unit per thana. The other 104 thanas excluding 12 under the Chittagonj Hill Tract district will require more than one unit. In addition to considering commuting distance population of each thana will also influence the number of units. Since area and population of thanas are the main considerations for establishing thana centres, one district (Chittagong Hill Tracts) consisting of 12 thanas require different treatment and hence are dealt with separately (Appendix B).

#### D. Requirements of the Number of Thana Centres

The following table gives the approximate number of thana centres required in each thana on the basis of one thana centre per 1000 participants. The census figures of 1961 being the latest in Bangladesh, calculation of this table is based on that. Keeping the dispersion of population at the thana level the same as 1961 and using 1974's figure of total population, which is 75 million (approximately) compared to 50.8 million in 1961. Since the total population figure has gone up one and a half times from 1961 to 1974, one percent of each thana population in 1961 is taken and multiplied by one and a half times to arrive at the number of participants in the programme at each thana.

Table A.2

Estimation of the Number of Thana Centres  
(Based on 1000 Participants Per Unit)

Range of No. of Student Population in Thanas	No. of Thanas Involved in the Range of Student Population	Suggested No. of Thana Centres per Thana	Total Requirement (approx.)
0-1000	74	1	74
1000-2000	201	2	402
2000-3000	85	3	255
3000-	<u>37*</u>	4 or more	<u>148</u>
Total	<u>397</u>		<u>877</u>

\*This includes Dacca Municipality which is counted as one but contains 4 thanas.

It can be seen from this table that more than fifty percent of the thanas will have participants within the range of 1000 to 2000. It will be economical and practical to have one thana centre instead of two, in the cases where the number of participants is more than 1000 but less than 2000. The same principle may be applied to other categories keeping a minimum of one thana centre per thana. This may result in less numbers of thana centres compared to 877 shown in the above table.

## APPENDIX B

## APPENDIX B

### SEPARATE PLAN FOR CHITTAGONG HILL TRACTS DISTRICT

Due to sparse distribution of population within a large area, 12 thanas of Chittagong Hill Tracts district cannot justify the establishment of the proposed system of education at the thana level. It is, therefore, suggested to implement the programme at the sub-division level instead of thana level. The following table gives the general picture of the situation in Chittagong Hill Tracts district which consists of three sub-divisions, and each sub-division contains four thanas.

Table B.1

#### Area and Participants Involved in the Chittagong Hill Tracts District

Number of Sub-divisions	Name of the Sub-divisions	Area in Sq. Miles	Number of Expected Participants
1	Ramgarh	1,727	2020
2	Rangamati	1,601	2400
3	Banderban	1,765	1323

It can be seen from the table that even at the sub-division level, that the number of participants are too small in comparison to the area involved. Therefore, this district may have large size administrative areas with satellite attendance areas. Larger blocks of time such

as two to three days per week at the centre might be feasible. Another alternative would be that the sub-division may be the nucleus of training facilities. From that point, the whole area may be covered by mobile units. In other words, taking programmes to students by mobile units instead of transporting the students. The proposed mobile unit for the Chittagong Hill Tracts district could provide intensive instruction while the unit would be at a given locale.

## APPENDIX C

# APPENDIX C

## Thanas Reference List

No.	Name	Area in sq. miles	Persons per sq. mile (1961)
DINAJPUR DISTRICT		2,609	655
Thakurgaon Sub-Division		1,241	564
1.	Teiuha	74	475
2.	Panchigar	103	479
3.	Boda	166	547
4.	Debiganj	119	548
5.	Thakurgaon	249	646
6.	Atwari	81	583
7.	Bahadanga	111	574
8.	Ranisankail	110	526
9.	Haripur	77	496
10.	Pirganj (D)	152	602
Dinaipur Sub-Division		1,368	738
11.	Bochaganj	87	672
12.	Biral	138	647
13.	Dinaipur	139	986
14.	Kaharol	80	617
15.	Birganj	157	587
16.	Khansama	69	839
17.	Chirirbandar	121	904
18.	Parbatipur	165	948
19.	Fulbari (D)	123	614
20.	Hakimpur	78	671
21.	Nawabganj (D)	152	621
22.	Ghoraghat	57	665
RANGPUR DISTRICT		3,705	1,025
Nilphamari Sub-Division		634	1,094
23.	Domar	97	896
24.	Dimla	127	792
25.	Jaldhaka	127	1,000
26.	Nilphamari	134	1,062
27.	Saidpur	47	2,348
28.	Kishoreganj (R)	102	1,239



Rangpur Sub-Division	1,266	981
29. Patgram	93	642
30. Haubandha	112	733
31. Kaliganj (R)	167	990
32. Gangachara	83	1,125
33. Rangpur	123	1,440
34. Kaunia	58	1,239
35. Pirgachha	103	1,129
36. Badarganj	166	909
37. Mithapukur	200	944
38. Pirganj (R)	160	853
Kurigram Sub-Division	971	926
39. Bhurungamari	89	923
40. Nageswari	161	856
41. Falbari (R)	63	958
42. Lalmonirhat	131	1,187
43. Kurigram	107	965
44. Ulipur	209	1,010
45. Chilmari	110*	671
46. Rahumari	101*	731
Gaibandha Sub-Division	834	1,155
47. Sandarganj	162	1,155
48. Sadullapur	90	1,303
49. Gaibandha	124	1,469
50. Fulchari	121*	560
51. Saghatta	87	1,248
52. Palashbari	75	1,392
53. Gobindaganj	176	1,112
BOGRA DISTRICT	1,502	1,048
Bogra Sub-Division	1,502	1,048
54. Panchbibi	109	790
55. Jaipurhat	92	1,191
56. Khetlal	93	890
57. Shibganj (B)	122	1,241
58. Gabtoli	132	1,459
59. Shariakandi	181	824
60. Dhunot	95	1,229
61. Sherpur (B)	115	763
62. Bogra	157	1,482
63. Kahaloo	119	802
64. Dubchanchia	63	1,069
65. Nandigram	103	566
66. Adamdighi	120	1,202

RAJSHAHI DISTRICT	3,654	769
Naogaon Sub-Division	1,132	804
67. Raninagar	95	770
68. Atrai	101	762
69. Manda	159	890
70. Niamatpur	173	505
71. Mahadebpur	152	794
72. Naogaon	106	1,419
73. Badalgachhi	83	1,214
74. Dhamoirhat	115	634
75. Patnitola	148	586
Nawabganj Sub-Division	865	724
76. Porsha	195	441
77. Gomastapur	123	664
78. Bholahat	50	583
79. Shibganj (R)	203	1,002
80. Nawabganj (R)	186	1,021
81. Nachole	108	335
Rajshahi Sub-Division	921	791
82. Tanor	114	516
83. Godagari	173	514
84. Boalia (Rajshahi)	34	1,673
85. Paba	101	984
86. Mohanpur	63	820
87. Bagmara	141	920
88. Durgapur (R)	77	701
89. Puthia	75	831
90. Charghat	143	881
Natore Sub-Division	736	742
91. Lalpur	127	735
92. Bagatipara	54	826
93. Natore	156	871
94. Baraigram	117	721
95. Gududasapur	78	877
96. Singra	204	584
PABNA DISTRICT	1,877	1,044
Sirajganj Sub-Division	964	1,150
97. Tarash	116	463
98. Raiganj (P)	103	1,017
99. Kazipur	143*	921
100. Sirajganj	126	1,612
101. Kamarkandi	36	1,531
102. Belkuchi	63	1,639
103. Chowhah	94*	831
104. Shahzadpur	125	1,619
105. Ullapara	160	1,101

Pabua Sub-Division	913	932
106. Chatmohar	143	776
107. Faridpur (P)	83	878
108. Atghoria	72	663
109. Ishurdi	104	966
110. Pabna	145	1,221
111. Sujanagar	135	808
112. Santhia	128	915
113. Bera	103	1,119
KUSHTIA DISTRICT	1,371	851
Kushtia Sub-Division	653	1,012
114. Khoksha	38	1,227
115. Kumarkhah	127	955
116. Kuhtia	122	1,362
117. Mirpar	126	860
118. Bheiamara	59	985
119. Daulatpur	180	890
Meherpur Sub-Division	276	693
120. Gangni	133	677
121. Meherpur	144	703
Chuadanga Sub-Division	442	711
122. Alamdanga	135	779
123. Chaudanga	111	709
124. Damurhuda	119	695
125. Jibannagar	78	613
JESSORE DISTRICT	2,547	860
Jhenzidah Sub-Division	828	757
126. Maheshpur	200	591
127. Kotchandpur	66	693
128. Kahganj	148	745
129. Jhenaidah	182	755
130. Harinakundu	88	812
131. Sankupa	144	999
Magura Sub-Division	405	835
132. Sripur	71	1,010
133. Magura	155	856
134. Sahkha	88	696
135. Mohammadpur	90	943
Narail Sub-Division	382	979
136. Narail	149	870
137. Lohagara	116	1,009
138. Kaha	118	1,080

Jessore Sub-Division	932	900
139. Abhoynagar	95	959
140. Bagherpara	105	739
141. Jessore	168	1,112
142. Manirampur	172	913
143. Keshabpur	100	967
144. Jhikargachha	160	840
145. Sarsha	132	718
KHULNA DISTRICT	4,652	526
Sarkhira Sub-Division	1,448	563
146. Kalaroa	90	893
147. Sarkhira	141	964
148. Debhata	66	734
149. Kaliganj (K)	128	1,003
150. Shamnagar	734*	195
151. Asasuni	159	892
152. Tala	130	1,053
Kbulna Sub-Division	1,708	492
153. Parkgacha	850*	228
154. Dacope	401*	191
155. Bariaghata	95	829
156. Dumuria	176	751
157. Phultala	29	1,463
158. Daularpur	44	2,755
159. Khulna	40	3,298
160. Terokheda	73	876
Bagnerhat Sub-Division	1,496	530
161. Motlahat	118	1,008
162. Fakirhat	62	1,027
163. Bagherhat	126	1,160
164. Rampal	660*	239
165. Sarankhola	294*	178
166. Morelganj	172	1,028
167. Kachua	64	1,212
BARISAL (BAKERGANJ) DISTRICT	4,240	1,005
Perojpur Sub-Division	753	1,236
168. Nazirpur	87	1,241
169. Banaripara	50	1,704
170. Showorupkati (Swarupkati)	71	1,802
171. Kawkhali	31	1,599
172. Perojpur (Pirozpar)	102	1,324
173. Bhandaria	63	1,432
174. Kathalia	61	1,235
175. Mathbaria	138	1,029
176. Patharghata	111*	688
177. Banna	39	1,046

Patuakhali Sub-Division	1,481	727
178. Betagi	64	1,227
179. Mirzaganj	67	1,114
180. Borguna	146	842
181. Amtali	251*	557
182. Kalapara	165*	395
183. Galachipa	423*	561
184. Patuakhali	148	1,076
185. Bauphal	214	920
Bhola Sub-Division	827	857
186. Balmohan	291*	785
187. Tajumuddin	129*	603
188. Burhanuddin	125*	1,011
189. Daulatkhan	116*	1,021
190. Bhola	166*	945
Barisal South Sub-Division	597	1,482
191. Bakerganj	156	1,363
192. Barisal	113	1,732
193. Nalchiti	90	1,288
194. Rajapur	63	1,412
195. Jhalakati	75	1,641
Barisal North Sub-Division	681	1,190
196. Wazirpur	95	1,460
197. Babuganj	57	1,510
198. Mehendiganj	135	1,172
199. Hizla	177	611
200. Muladi	101	1,103
201. Gaurnadi	116	1,794
FARIDPUR DISTRICT	2,694	1,180
202. Kalkinj	110	1,399
203. Goshairhat	82	1,125
204. Bhedarganj	125	1,108
205. Palong	67	1,522
206. Naria	90	1,624
207. Janjira	98*	969
208. Shibohar	129	1,539
209. Madaripur	110	1,646
210. Rajoir	89	1,355
Gopalganj Sub-Division	571	1,205
211. Kotalipara	154*	980
212. Gopalganj	180	1,243
213. Maksudpur	128	1,339
214. Kasiani	109	1,291

Faridpur Sub-Division	760	1,092
215. Alphasdanga	36	1,052
216. Boalmari	173	1,021
217. Nagarkanda	148	1,051
218. Bhanga	84	1,678
219. Sadarpur	105	1,100
220. Char Bhadrasan	64	702
221. Faridpur	149	1,063
Rajbari (Goalundo) Sub-Division	465	1,180
222. Baliakandi	125	944
223. Pangsha	175	905
224. Rajbari	107	1,060
225. Goalundo	58*	769
DACCA DISTRICT	2,882	1,768
Manikganj Sub-Division	532	1,318
226. Shibaloy	77*	946
227. Daulatpur (D)	84*	1,091
228. Ghlora	56	1,327
229. Saturia	62	1,559
230. Manikganj	76	1,604
231. Hariranipur	94	1,236
232. Singair	84	1,522
Dacca Sadar South Sub-Division	332	3,429
233. Nawabganj	109	1,478
234. Dohar	36	2,099
235. Keraniganj	71	2,401
236. Tejgaon	108	3,217
237. Dacca Municipality consisting of Balbagh, Kenwah, Ramna and Shirapur Thanas).	8	45,251
Munshiganj Sub-Division	369	1,979
238. Serajdikhan	70	1,911
239. Srinagar	78	1,756
240. Lohajang	55	2,164
241. Tangibari	46	2,420
242. Munshiganj	80	1,952
243. Gozaria	40	1,828
Narayanganj Sub-Division	711	2,175
244. Fatullah	31	3,532
245. Narayanganj	29	7,262
246. Baidyerbazar	66	2,034
247. Araihaazur	71	2,150
248. Rupganj	102	1,744

250. Raipur (D)	147	1,904
251. Shibpur (D)	87	1,518
252. Monohardi	96	1,705
Dacca Sadar North Sub-Division	938	1,044
253. Kapasia	139*	1,112
254. Kaliganj	110	1,385
255. Sripur	179*	702
256. Joydebpur	139*	900
257. Kaliakoir	121*	786
258. Sabhar	133*	1,120
259. Dhamrai	117	1,520
MYMENSINGH DISTRICT	6,361	1,103
Tangail Sub-Division	1,301	1,143
260. Mirzapur	144	1,281
261. Nagarpur	115	1,426
262. Tangail	160	1,538
263. Basail	165*	914
264. Kalihati	187*	1,213
265. Ghatail	174*	908
266. Gopalpur	171*	1,290
267. Modupur	185*	734
Jamalpur Sub-Division	1,311	1,105
268. Sharishabari	104	1,334
269. Jamalpur	185	1,341
270. Madarganj	90*	1,126
271. Melandaha	94	1,242
272. Islampur	143*	907
273. Diwanganj	163*	917
274. Sribardi	121	1,120
275. Sherpur (M)	138	1,338
276. Nakla	67	1,211
277. Nalitabari	206	751
Mymensingh Sadar North Sub-Division	752	1,104
278. Haluaghat	165	787
279. Phulpur	257	940
280. Iswarganj	204	1,373
281. Nandail	126	1,420
Mymensingh Sadar South Sub-Division	852	1,246
282. Mymensingh	146	1,701
283. Muktagachha	121	1,304
284. Phulbaria	163	1,201
285. Trisal	97	1,389
286. Bhaluka	171*	677
287. Ghaffargaon	154	1,359

Kishoreganj Sub-Division	989	1,245
288. Hossainpur	46	1,776
289. Kishoreganj	69	2,150
290. Pakundia	69	1,740
291. Katiadi	86	1,680
292. Kuliarchar	40	1,893
293. Bhairab	47	2,124
294. Bajitpur	73	1,413
295. Oshtogram	116	592
296. Nikli	117	768
297. Karimganj	77	1,669
298. Itna	194	508
299. Tarail	55	1,356
Netrokona Sub-Division	1,155	832
300. Kendua	129	1,163
301. Madan	90	790
302. Khaliajuri	112*	384
303. Mohanganj	96	787
304. Atpara	74	961
305. Barhatta	85	891
306. Netrokona	121	1,015
307. Purbadhala	134	949
308. Durgapur	166	776
309. Kalmakanda	148	644
SYLBET DISTRICT	4,785	729
Sunamganj Sub-Division	1,445	601
310. Dharmapasha	140	672
311. Tahirpur	141*	408
312. Jamalganj	196*	369
313. Sulla	100	468
314. Deraï	161	661
315. Sunamganj	288	680
316. Chharak	277	697
317. Jagannathpur	141	720
Sylhet Sub-Division	1,301	789
318. Balaganj	151	850
319. Biswanath (Bishwanath)	81	1,118
320. Sylhet	229	1,038
321. Gowanghat	250	344
322. Jaintiapur	80	352
323. Kanaighai	155	571
324. Zikiganj	111	954
325. Beamoazar	98	1,054
326. Golapganj	106	1,082
327. Fenchuganj	41	1,072



Maulvi Bazar Sub-Division	1,045	710
328. Barlickha	177*	599
329. Kulaura	263*	707
330. Rajnagar	131	743
331. Kamalganj	188*	574
332. Maulvi Bazar	132	1,028
333. Srimangal	156*	700
Habiganj Sub-Division	993	859
334. Chunarughat	192*	669
335. Bahubal	89	933
336. Nabiganj	160	898
337. Ajminganj	83	616
338. Baniyachang	192	721
339. Habiganj	95	1,250
340. Lakhai	75	881
341. Madhabpur	108	1,141
COMILLA DISTRICT	2,594	1,693
Brahmanbaria Sub-Division	742	1,552
342. Nasirnagar	121	1,076
343. Sarail	93	1,397
344. Brahmanbaria	187	1,642
345. Kasbah (Koshba)	116	1,600
346. Nabmagar	145	1,688
347. Bancharampur	80	1,924
Comilla Sadar North Sub-Division	515	1,865
348. Honina	69	1,996
349. Daudkandi	145	1,858
350. Muradnagar	132	1,857
351. Debiduar (Debidwar)	91	1,936
352. Chandina	78	1,694
Comilla Sadar South Sub-Division	678	1,649
353. Burichang	116	1,710
354. Comilla	107	2,031
355. Chouddogram	152	1,575
356. Laksham	209	1,514
357. Barura	93	1,579
Chandpur Sub-Division	658	1,761
358. Kachua	92	1,599
359. Matlab Bazar	158*	1,724
360. Hajiganj	133	1,747
361. Chandpur	183*	1,669
362. Faridganj	91	2,215

NOAKHALI DISTRICT	1,855	1,285
Noakhali Sub-Division	1,501	1,194
363. Raipur	78*	1,566
364. Ramganj	118	2,233
365. Lakshipur (Lakshmipur)	199	1,355
366. Begamganj	158	2,315
367. Senbag	62	1,819
368. Companyganj	73*	1,191
369. Noakhali (Shudharam)	320*	774
370. Ramgati	251*	643
371. Hatia (Hatiya)	242*	621
Feni Sub-Division	354	1,668
372. Belonia (Parshuram)	70	861
373. Chhagalnaiya	60	2,339
374. Feni	137	2,037
375. Sonagazi (Shonaghazi)	88*	1,257
CHITTAGONG DISTRICT	2,705	1,103
Chittagong Sadar North Sub-Division	1,157	1,317
376. Shondip (Sandwip)	187*	1,019
377. Mirsharai (Mirsarai)	177*	1,059
378. Sitakund	117*	978
379. Double Mooring	39	4,882
380. Panchlaish	19	5,279
381. Chittagong (Kotwali)	4	34,436
382. Hathazari	101	1,555
383. Fatikchari	292*	591
384. Raozan	94	1,693
385. Rangunia	133*	912
Chittagong Sadar South Sub-Division	673	1,368
386. Boalkhali	53	1,995
387. Patia (Patiya)	197	1,494
388. Anwara	66	1,667
389. Satkania	206*	1,176
390. Banshkhali	151*	1,113
Cox's Bazar Sub-Division	875*	616
391. Kutubdia	34	1,270
392. Chakaria	239*	653
393. Moishkhal (Maheshkhali)	123*	633
394. Cox's Bazar	80*	1,062
395. Ramu	151*	454
396. Ukhia	101*	498
397. Teknaf	147*	396

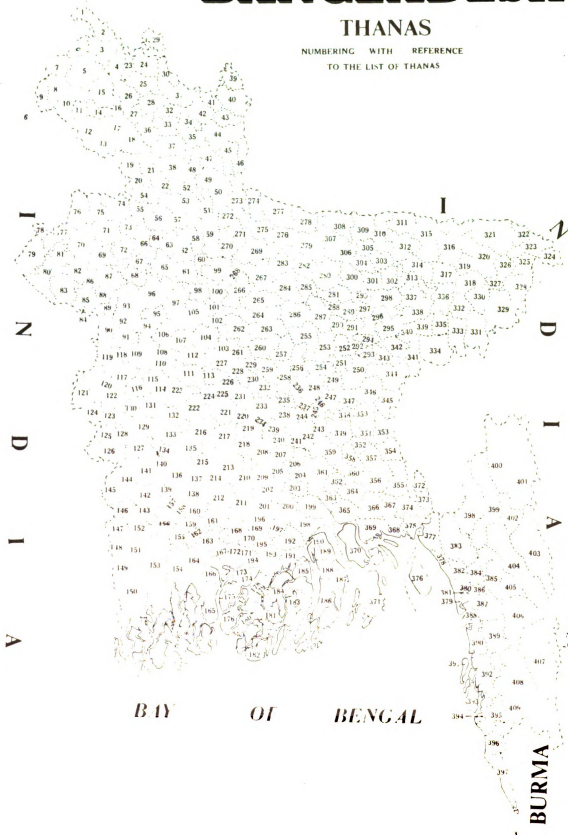
HILL TRACTS DISTRICT (CHITTAGONG HILL TRACTS DISTRICT)	5,093*	76
(Chittagong Hill Tracts) Ramgarh Sub-Division	1,727*	78
398. Ramgarh	349*	105
399. Mahalchhari	402*	131
400. Dighinala	259*	110
401. Bablakhali (Kasalong)	717*	24
Rangamati Sub-Division	1,601*	102
402. Langadu	181*	82
403. Barkal	510*	67
404. Rangamati	644*	103
405. Chandraghona	266*	181
Bandarban Sub-Division	1,765*	49
406. Bandarban	346*	84
407. Ruma	514*	42
408. Lama	724*	30
409. Naikhongchhari	181*	80

\*Includes a considerable area under forest or permanent water bodies.

# BANGLADESH

## THANAS

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